PERINS PEAK

WILDLIFE HABITAT MANAGEMENT PLAN

CO-03 WHA-T1

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This Habitat Management Plan (HMP) was prepared by the Bureau of Land Management, in cooperation with the U. S. Fish and Wildlife Service and the Colorado Division of Wildlife.

The Perins Peak HMP is a dynamic document which will be updated and revised as new management direction and information becomes available. The plan serves to prescribe land management and related species population management guidance for the mutual benefit of wildlife and other resources and their uses. The plan will initiate the USFWS American Peregrine Falcon Recovery Plan objectives in this district, and will be covered by Sikes Act implementation.

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
District Office
P. O. Box 1269
Montrose, Colorado 81401

IN REPLY REFER TO
6620 (6521)
(130)

Mr. Bob Rosette, SW Regional Manager
Colorado Division of Wildlife
P. O. Box 788
Montrose, Colorado 81401

Dear Bob:

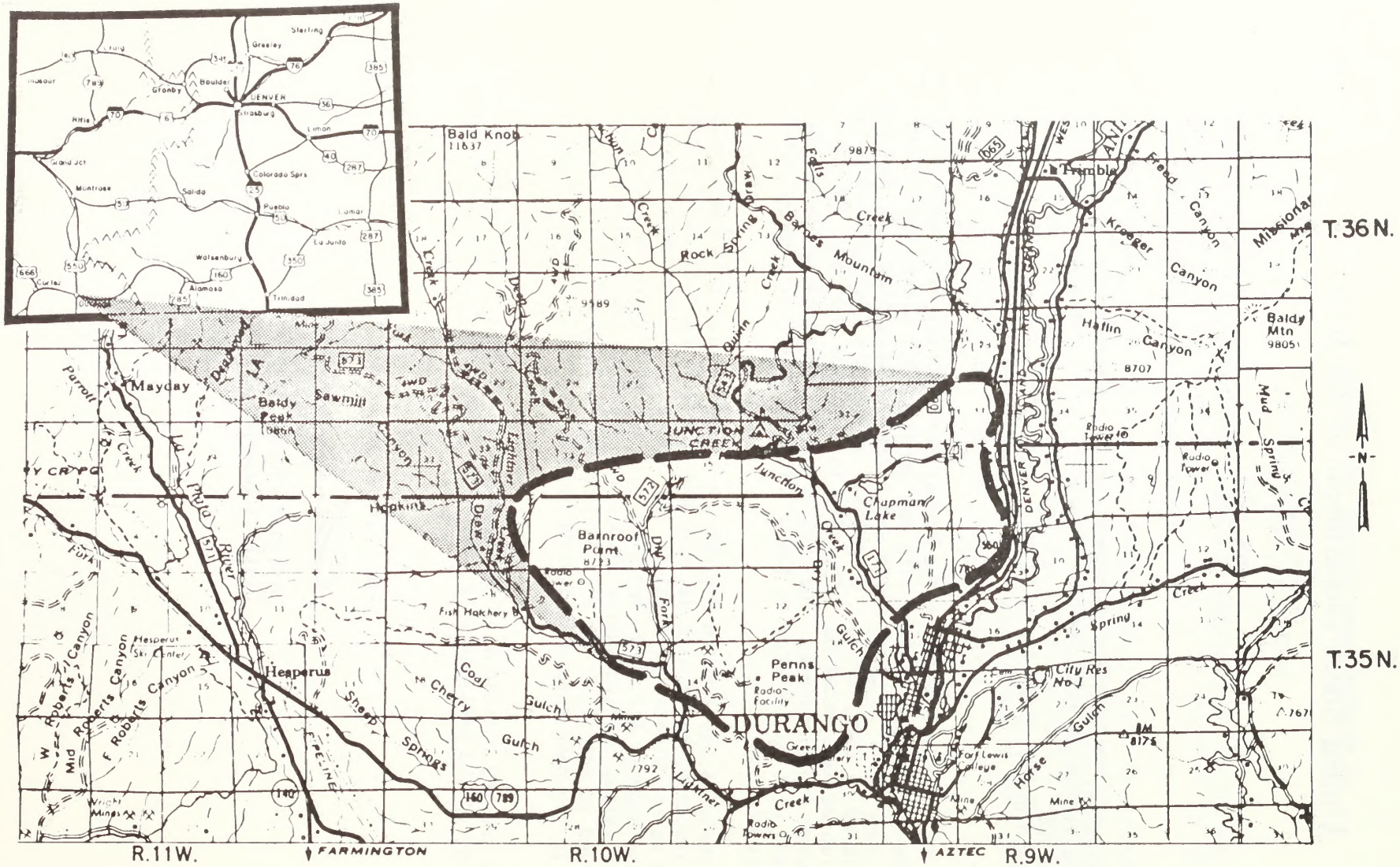
Enclosed is the final draft of the Perins Peak Habitat Management Plan (HMP). We have worked closely with Hal Burdick, Bob Clark, and Arthur Gresh of your staff in preparation and review of this plan. It has also been reviewed by Gerry Craig. We greatly appreciate the assistance and cooperation we have received. The plan is complete and ready for your final review and signature. The maps are being prepared in our Denver office, and will be included in the printed HMP which will be distributed this winter.

Several projects outlined in the HMP are scheduled for this Fiscal Year. We have discussed these with Hal and Bob, and will be setting up a meeting soon to coordinate the details. We have also advised Gerry Craig of the funds (approx. $10,000), which we have for this year, to conduct a peregrine falcon reintroduction study, and initiate the reintroduction as outlined in the plan. We will probably want to prepare a joint press release in the near future to inform the public of this cooperative effort.

If there are any questions, please contact Terry Reed of my staff. He will be setting up the meetings with your staff, Gerry Craig, etc, in the near future.

Sincerely yours,

Marlyn V. Jones
District Manager



LOCATION MAP
PERINS PEAK WILDLIFE HABITAT AREA

INTRODUCTION

I. Introduction

The Perins Peak Wildlife Habitat Management Area encompasses approximately 6,900 acres northwest and immediately adjacent to the city of Durango, Colorado (see location map). It is a rugged mixture of high forested mesas, sandstone cliffs, steep ridges, and narrow mountain valleys at the southern end of the San Juan Mountains. The vegetation is representative of mountain foothills, a variety of forest, shrub and meadows transitional between the Upper Sonoran and Montane life forms.

Historically, the area has served as critical winter range for large herds of Rocky Mountain elk, mule deer, and a remnant population of bighorn sheep. Breeding populations of golden eagles, prairie falcons, wild turkeys, and in recent years, a discovery of an active peregrine falcon eyrie have added to the significance of the area.

Because more than half the elk herd in Colorado Division of Wildlife Game Management Unit 74 is dependent upon this small area in severe winters, and because the rapid development of the Durango area and increasing recreational pressures pose serious threats to some of the more sensitive species, this area was given priority for development of a habitat management plan by the BLM and the Colorado DOW in the San Juan Basin.

Prior to development to this habitat management plan, certain problems, constraints and necessary actions were identified in the BLM Durango-Chromo Management Framework Plan. These included; the need for land acquisition or easements in key big game wintering areas and migration corridors; actions to reduce wildlife-traffic hazards; closing sensitive areas to off-road vehicle use; special grazing management on big game winter range; and restrictive methods of timber removal or mineral exploration.

II. Description of Environment

A. Inventory

During the period from November 1, 1977, to February 20, 1978, employees of the BLM conducted intensive inventories of vegetative cover, forage utilization, big game migration patterns, and winter concentration areas on DOW and BLM lands. Yearly extensive range transect utilization studies and aerial elk population trend counts have been conducted by the Colorado DOW since at least 1971. Preliminary soil survey information was provided by the USDA Soil Conservation Service. Faunal inventories of the vicinity were

published by the U. S. Bureau of Reclamation in 1976. Information on nesting eagles and falcons was solicited from Gerald Craig, Colorado DOW Raptor Biologist. In addition, the personal observations of employees of BLM, DOW, USFS, and area residents provided much information on wildlife use areas and seasonal activities. These sources were used to compile the following descriptions of the environment, and to formulate management objectives and action plans.

B. Lands

The Perins Peak Wildlife Habitat Area (WHA) presently includes about 6,900 acres, of which 3,500 are public lands administered by BLM, and 3,400 acres owned by the Colorado DOW (see land ownership map, Appendix A). The San Juan National Forest lies on the northern edge, and numerous private land parcels lie around and between the public lands. Of these private lands, a total of 1,450 acres are considered for eventual inclusion in the WHA.

Historically, agriculture and livestock grazing were the primary land uses in the area. However, the expansion of the population in Durango has brought about a dramatic change. Prime agricultural land in the Animas River Valley is now largely subdivided. Commercial and residential growth has pushed into areas of marginal suitability for building. Current population estimates project continued growth to between 31,000 to 38,000 people in the vicinity in the year 2,000. Property values have soared and housing is in short supply. Thus ranch property is rapidly being converted to residential development as land speculation thrives. However, some cattle ranches still operate on lands adjacent to and within the Forest boundaries and the WHA.

The U. S. Forest Service has recently contracted timber sales in the area immediately north of the Forest boundary, and Dry Fork Lightner Creek access road will be upgraded to allow logging trucks to pass through the DOW lands. Forest Service management plans for the area include intensified efforts to provide improved big game habitat on those areas utilized as winter range.

C. Grazing Management

All of the public lands in the WHA have been grazed by either domestic sheep or cattle in the past. When the Colorado DOW purchased the surrounding base properties in 1968 & 1970, the grazing privileges on the Perins Peak and Animas Mountain tracts were not reassigned to other private livestock operators (refer to Grazing Allotment Map). Thus only 520 acres of public lands

in the WHA are presently licensed for grazing privileges. Of these, only 160 acres are in use due to lack of water or steep slope on the remaining 360 acres. In the interim years between the DOW land acquisition and signing of a formal agreement the additional 3,000 acres of public lands in the WHA have been managed to reserve all forage for wildlife. Because of the critical big game winter habitat designation of the area, season of use on licensed allotments has been set from May 15 to October 15, with only cattle grazing allowed, in order to minimize livestock-wildlife competition. The Colorado DOW has not allowed livestock grazing on the lands they control.

D. Mineral Resources

Known mineral resources are limited to coal. Mining operations were conducted on Perins Peak in the WHA during the early 1900's using underground mining techniques. The product was a low grade coal which is no longer economically feasible to extract. A possibility of geothermal energy may exist as indicated by the presence of "hot springs" about 12 miles north of the WHA, but no exploratory drilling has been done. Mineral ownership on state and private lands involved is in the hands of the respective owners. Possibilities of future development are unlikely due to the availability of other higher quality mineral sources locally at lower development costs. No coal lease will be issued in the WHA prior to completion of a regional environmental statement on coal development.

E. Water Resources

Water resources in the WHA are very limited. Two springs have been partially developed, but are in disrepair at present. Several intermittent streams serve to channel away spring snow-melt and fall rainwaters. While no measurements of runoff or sediment flows exist for these channels, a number of large gullies exist in areas of fragile soil, and active erosion is evident on many areas. Within a half mile of the WHA boundary are a number of perennial sources of water. These are the Animas River, Chapman Lake, Lightner Creek and Junction Creek. Both creeks are usually dry in summer due to the use of streamflow for irrigation purposes. Any water developments in the WHA must rely on the collection and retention of precipitation and runoff, except in the case of the two springs. Water rights on these springs reside with the Colorado DOW.

F. Forest Resources

The BLM statewide timber inventory (1971) included only three photo sample plots of commercial timber in the WHA. Two of these were on Animas Mountain and the third was on the Barnroof Point Mesa, all in Ponderosa pine stands. The samples give an average site index of 30 (based on 50 year cycle) with 45% stocking rate. Volume ranged from 216 cubic feet to 313 cubic feet per acre. Average stand age is 70 years. Most of the public lands in the WHA were classes as non-commercial forest or shrubland. Field inventory indicated some bark beetle infestation, mistletoe, and porcupine damage in the Ponderosa pine stands. None of these problems are serious enough to warrant immediate clean-up or salvage operations.

G. Recreational Resources

Recreational use of the area involves hunting, hiking, bird-watching, skiing, and off-road vehicle operation. Off-road vehicle use is prohibited except on designated roads on DOW lands, but inadequate fencing, vandalism, and maintenance problems limit the effectiveness of regulations. Skiing has been limited to DOW lands by accessibility. Aerial observations have indicated that skiers may be causing harassment of elk, and it may become necessary to close some areas to skiing.

H. Visual Resources

The landform of the area consists of low rolling hills, ridges, and steep-sided mesas which have been highly dissected by creeks and intermittent drainages. Horizon lines are rounded and undulating with an occasional vertical rock outcrop or peaks. The flat mesa tops slope slightly to the south. Horizontal rock layers are exposed on the steep, rocky mesa sides. The rock is generally brown and tan with some white layers. Swift, rocky streams follow curvilinear courses.

A dense canopy of coarse textured, dark green Ponderosa pine blankets the mesa tops and more level areas. Coarse textured, dark green Pinyon-Juniper occurs in a mottled pattern on steeper slopes. Large patches to small clumps of light green mountain shrubs occur with the Pinyon-Juniper and elsewhere throughout the area. Light green, medium textured aspen clumps occur on north slopes and in valley bottoms. Curvilinear stream corridors are vegetated with light green cottonwoods, willows, shrubs and meadows.

Structures occur mainly as houses along Lightner Creek and in a subdivision in the Chapman Lake - Junction Creek area.

The scenery quality of the entire area is rated as "B" (characteristic). The distance zones are foreground/middle-ground with seldom seen areas occurring on the higher, flatter ground. Sensitivity levels (which reflect amount of use and user reaction to change in the existing landscape) are high for areas that can be seen from Durango, Chapman Lake, Junction Creek, and highways 550 and 160. The remainder of the area is given a medium sensitivity level.

The land here falls into one of three VRM classes (refer to Visual Resources Map, Appendix A). Seldom seen areas are Class IV. Foreground/middleground areas are Class III in areas of medium sensitivity and Class II in areas of high sensitivity from the above noted viewing areas.

I. Climate

The general climate is one of warm summers and cool winters. Temperatures may range from 98 degrees F. to -27 degrees F. Average precipitation is 17 to 18 inches, including a 64 inch average snowfall. June and July are the driest months of the year, with occasional severe thunderstorms from August until October.

J. Soils

There are fifteen soil mapping units within the WHA Area, (refer to Soils Map). Thirteen of these occur within seven separate Soil Conservation Service Range Sites. Two land types, Badlands and Rock out-crop, consist of shale and sandstone outcrops with sparse vegetation and only very shallow soils and are not listed under any range site. Complete descriptions of these range sites and soil mapping units may be found in Appendix B. The list of range sites and soil mapping units is as follows:

Range Site	#238 - Brushy Loam
Soils:	RCL - Haploborolls - Rubble Land Complex
	XC5F - Carracas - Sanchez Complex
	C5F - Carracas Loam
Range Site	#223 - Loamy Park
Soils:	V5CD - Clayburn Loam
	V2CD - Hesperus Loam
	V9CD - Connerton Loam

Range Site	#241	- Mountain Meadow
Soils:	V4CD	- Big Blue Clay Loam
Range Site	#288	- Rocky Foothills
Soils:	XMO-F	- Lazear Rock Outcrop Complex
Range Site		- Ponderosa Pine Woodlands
Soils:	XM1-E	- Valto Rock Outcrop Complex
	XM6-D	- Fortwingate - Rock Outcrop Complex
	M6CD	- Fortwingate Stoney Fine Sandy Loam
Range Site	#291	- Shaley Foothills
Soils:	E6-CE	- Midway Clay and Clay Loam
Range Site	#228	- Mountain Loam
Soils:	A3-B	- Jodero Loam
Range Site	None	
Soils:	Bd	- Badlands
	R1	- Rock Outcrop

These range sites occur in SCS Resource Area 48 in Colorado. Because the Durango area is at the southern limit of the resource area, and because the elevation, moisture and temperature regimes are characteristic of a transitional zone, vegetative composition on the ground may vary significantly from the "typical" climax vegetation described for each range site. These observed differences are further compounded by localized variance in topography, aspect, and moisture. Human manipulation of the vegetation through grazing systems or brush control and seeding may produce further anomalies.

K. Vegetation

Vegetation was inventoried using BLM Manual 6602, Integrated Habitat Inventory and Classification System. This is a heirarchic system which starts with physiographic regions, then narrows to climax associations and finally combines standard land form with dominant vegetation to describe specific habitat sites. Specific sites referred to later in this report are coded by the IHIC System.

Standard land forms found in the habitat area include hills, ridges, mesas, benches, valleys, intermittent streams, and wet meadows. The vegetation map includes eight general types: Ponderosa pine woodland, Douglas fir, Pinyon-Juniper woodland, Aspen, Riparian cottonwoods, Riparian shrub, Mountain shrub, and Meadow. Vegetative composition within each type varied between different sites (refer to vegetation transect record summary, Appendix C). Each type is considered separately below.

Ponderosa pine woodlands are found on moderate to steep slopes, benches, ridge tops, and mesa tops with south, east or west aspects. Douglas fir and Juniper trees may be intermixed in the overstory. Oakbrush, Snowberry, Serviceberry and Mountain mahogany are the major shrub species. A mixture of grasses and forbs compose the ground cover where light and moisture are available. These sites are of high value to a variety of wildlife, being productive of seeds, berries, and forage, and providing a maximum of spatial diversity for denning, nesting and foraging activities. Snow accumulation is not limiting to deer and elk movement during winter months, thus these areas are heavily used by big game from November through March. Potential for habitat manipulation and improvement is high. This type represents approximately 2,050 acres.

Stands of Douglas fir are limited to north slopes of mesas and ridges or extremely narrow valleys and sideslopes where solar influence on temperature is low, and snow depths reach their greatest accumulation. Oakbrush, serviceberry, snowberry and mountain mahogany predominate among shrubs. Poa and elk sedge are the major grass-like plants. Dense coniferous foliage provides good nesting and cover, but limits the amount and productivity of understory plants through competition for sunlight. Potential for manipulation to improve habitat conditions is low due to steep terrain, limited acreage, and deep snow cover in winter. This type represents about 230 acres.

Pinyon-Juniper woodland occurs on south, east and west aspect slopes where snow accumulation is minimal and the evaporation rate is high. Oakbrush, snowberry, mountain mahogany, bitterbrush, squawapple, serviceberry and a mixture of grasses and forbs grow in the open understory. This type is of high value to wildlife, producing seeds, berries, and forage which are available year-round due to the light snow cover. Deer and elk concentrate on these slopes in winter, heavily utilizing the preferred browse species, and sometimes accelerating erosion problems along game trails. Potential for habitat manipulation is limited to hand tools because of steep terrain, but the value of improvements is enhanced by year-round utility of the site. Pinyon-Juniper woodlands cover approximately 650 acres of the area.

Aspen groves occur on north slopes and valley bottoms, often in association with, and immediately downslope of Douglas fir. Oakbrush, snowberry, chokecherry, serviceberry, and dogwood are the major shrub species. Poa spp., elk sedge, and numerous forbs compose the ground cover. These groves are of moderately high value to a variety of wildlife. Relatively dense forage of particularly desirable browse species as well as seeds and berries are available through most of the year until snow depths reach critical limits. Spatial diversity is favorable to bird species, and cavity nests are particularly abundant. Potential for manipulation is limited due to small acreage involved. This type could be expanded to other suitable sites. Presently, this type represents about 65 acres.

Riparian cottonwoods occur in limited areas along intermittent stream channels. Understory shrubs include hawthorne, oakbrush, Colorado barberry, alder, serviceberry, snowberry, and rose. A variety of grasses and forbs are available. The presence of water in spring and early summer make these sites valuable to most wildlife. Migratory birds concentrate in the trees and shrubs for nesting and feeding. Forbs and grasses retain succulence longer in these moist sites and are thus sought out by deer and elk as they begin to migrate into the area in fall. Snow accumulation and human activity (skiers) generally reduce the utility of these areas in mid-winter until spring. Potential exists to increase this habitat type by planting along unstabilized stream channels. It is presently limited to approximately 25 acres.

Riparian shrubs occur in portions of intermittent stream channels and the bottom of eroded gullies. Willows are the dominant shrub, with some cattails, thistles, and grasses in the understory. The dense stands of willow are excellent nesting habitat for small birds, as well as providing cover for small mammals. Deer and elk browse the willow heavily in fall and winter. This early successional stage of vegetation is important in stabilizing eroding gullies. Again, potential exists to expand this type into areas of unstabilized gullies which have not been colonized by willows. Approximately 30 acres of intermittent stream channel are now covered by willows.

The Mountain shrub type occurs on the greatest variety of sites of any type in the area. It is an early successional vegetative type, generally favored by disturbance of the climax community. Thus, where Ponderosa pines have been removed by fire, or meadow grasses removed by human occupation or grazing, shrubs may invade and dominate the site for decades. Differences in aspect, snow cover and historic grazing or browsing may affect the composition of the vegetation. Gambel's oak is normally the dominant species. It is intermixed with snowberry, serviceberry, chokecherry, mountain mahogany, squawapple, bitterbrush and occasionally big sage brush and four wing saltbrush. Numerous grasses and forbs occur in the

understory and in small meadow openings scattered through the type. In general, this type is of high value to wildlife, producing mast crops in mature stages, and providing good forage in the younger stages. Potential for manipulation and habitat improvement is high. Removal of mature shrubs by one of several methods will result in root sprouting and rapid growth accompanied by large increases in browse and forage production. Selective thinning in dense stands can increase mast production by favoring mature shrubs, and at the same time open the understory to increase grasses and forbs. This type covers about 3,270 acres.

Meadows occur in valley bottoms or on gentle slopes and benches associated with oakbrush and Ponderosa pine. Depth of the water table, grazing history, and seeding treatments are the major factors affecting vegetative composition. Wet meadows are dominated by rushes and alkali muhly. Dry upland meadow openings are a mixture of needle and thread grass, blue grama, fescue, bluegrass, mountain muhly, and squirreltail. Valley meadows support a more mesic variety of wheatgrass, brome, alfalfa, and squirreltail. Forbs may make up a considerable portion of the total production. These meadows are highly productive of seeds and insects which in turn support the local bird and small mammal populations. Deer and elk utilize the meadows heavily in spring and fall. Potential for manipulation is moderate. Productivity may be increased by raising the water table where severe erosion has taken place. Some increase in production could be made by seeding areas which failed to recover from past grazing abuse. There are approximately 570 acres of meadows in the area.

L. Wildlife

Records of wildlife utilizing the HMP area do not necessarily reflect intensive inventory results. Only mule deer and elk populations have been closely studied in past years. Large mammals and birds are more easily observed than mice or shrews, so much more is known about their locations and habitats at all times of the year. A list of species thought to be present in the area is given in Appendix D. The list was prepared for the Bureau of Reclamation Animas - La Plata Project Bodo Park Area approximately three miles south of the Animas Mountain HMP Area. Some of the species, for example black bears or cougars, have large territories which likely overlap the San Juan National Forest to the north. Others are migratory, either wintering or spending the warm season in the area. Certain species may not utilize the area at all in some years.

FIGURE

WILDLIFE MANAGEMENT AREAS

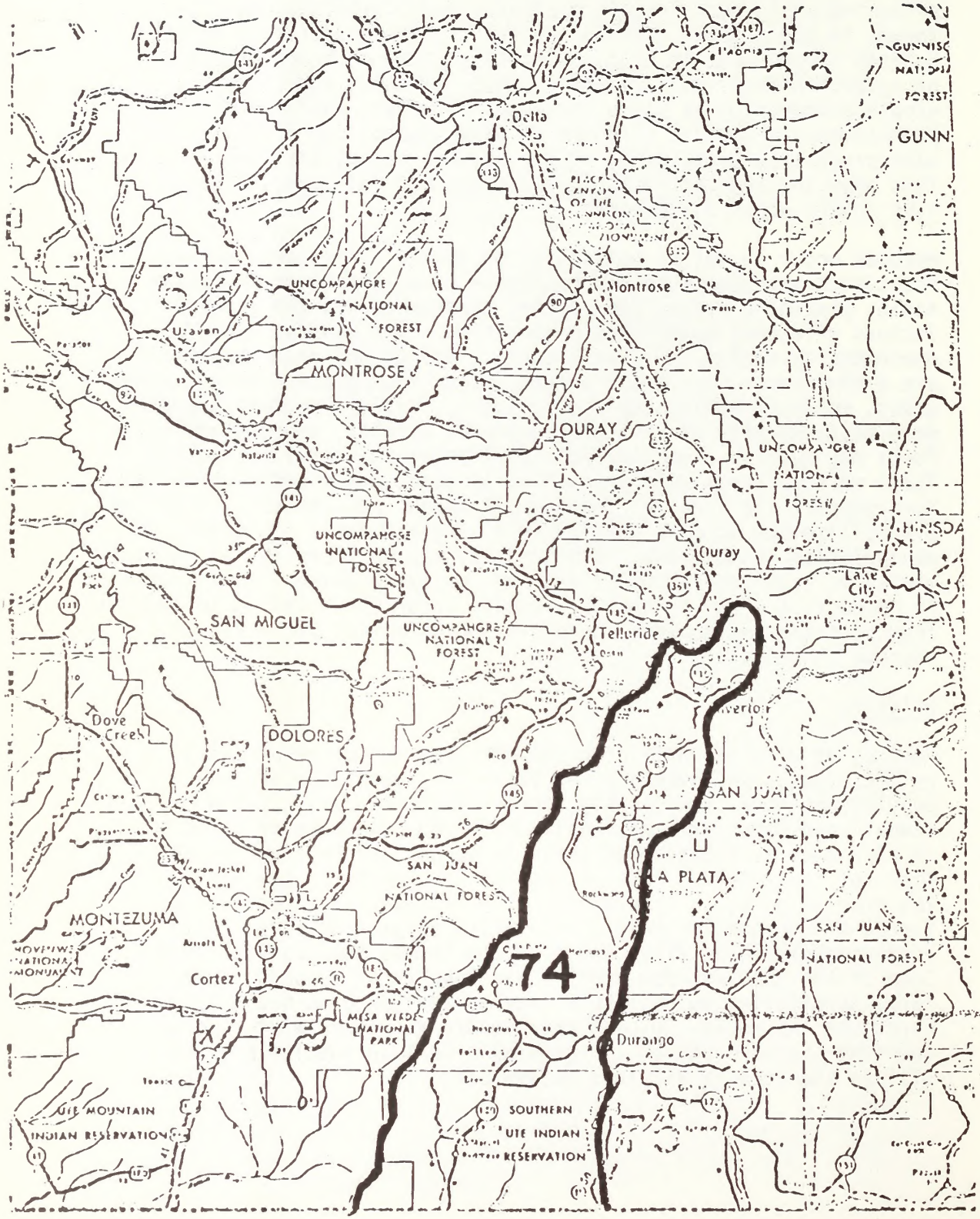


Figure 1

Of the key species identified as having special significance for management within the wildlife habitat area, peregrine falcon, golden eagle, prairie falcon, mule deer, elk, and bighorn sheep, all are somewhat migratory (see Wildlife Inventory Map, Appendix D). The raptors arrive at traditional eyries in early spring, and except for occasional wintering golden eagles, depart by October to other undetermined winter hunting grounds. Some deer and elk reside in the area year-round, but their numbers are swelled by the arrival of the major body of the deer and elk herds in Game Management Unit 74, (Fig. 1), moving southward from the National Forest lands as the snow cover deepens in October. By mid-March, northward migrations have begun again. Bighorn sheep also move south into the area from the Forest lands, but historically, only in the worst winters.

Past observations of nesting raptors indicate long and nearly continuous yearly occupation of nesting sites by golden eagles and prairie falcons. Confirmed records of nesting by peregrine falcons exist only for 1974 and 1975. In 1974, the peregrines hatched and reared four young. The 1975 nesting attempt failed. Pesticide residues in the eggs were recorded at the highest known levels for wild peregrine eggs yet reported (Craig personal communication).

Prairie falcons and golden eagles are less likely to be affected by pesticides because they tend to prey upon non-migratory small mammals that are not exposed to organochlorine pesticides locally. Human disturbance at or near nesting cliffs is likely to be the greatest threat to these birds.

Bald eagles commonly winter along the Animas River and may infrequently utilize the WHA for hunting or scavenging.

Deer and elk have traditional preferred wintering grounds. In this region, critical winter habitat is largely restricted to a range of elevation between 7,000 feet and 9,000 feet because of snow depth. Much of the historic winter range around Durango has been subdivided, forcing greater concentrations of animals on to a continually shrinking base. In addition, approximately 1,200 acres of public lands and 800 acres of private lands on which are presently undeveloped and heavily used as big game winter range, are threatened with isolation by development encroaching on the remaining migration corridors (see Wildlife Inventory Map).

Normal wintering populations within the WHA are estimated at 1,200 elk and 3,000 mule deer. This represents 40 percent and 30 percent of the total elk and mule deer herds in Game Management Unit 74,

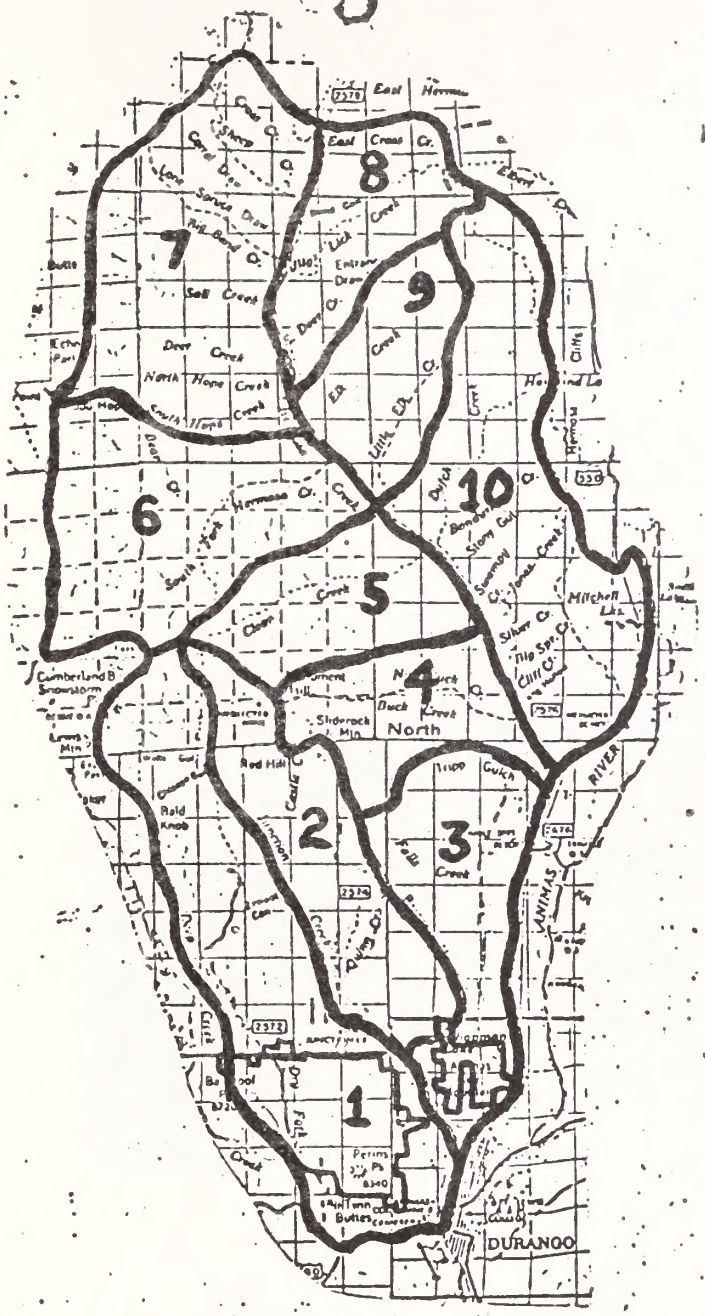
respectively. In severe winters, this may climb to 2,000 elk and 5,000 mule deer. These figures are based on DOW population estimates, harvest data, and aerial trend counts for Data Analysis Units E-30 (Elk) and D-29 (Deer) (see Appendix D - Tables 1, 2 and 3).

The boundaries of DAU E-30 correspond exactly to those of Game Management Unit 74. DAU D-29 includes an additional two GMU areas west of GMU 74. However, GMU 74 has consistently produced 50 percent of the deer harvest in DAU D-29, and the assumption has been made that 50 percent of the total herd resides in GMU 74.

Previous studies by the DOW (1976) have shown that only 50 to 100 elk migrate south of Highway 160, and about 50 percent of the elk sighted on aerial trend counts are seen in sectors 1, 2 and 3 of the Hermosa-Junction Creek flight area (Figure 2). Animals in these sectors funnel directly into the habitat area. The same studies showed that a significant migration of mule deer crossed south and west of Highway 160. Thus, a smaller portion of the herd is estimated to winter in the WHA.

A small population of wild turkeys resides in the WHA year-round. The wintering population is bolstered by additional birds moving south from the National Forest, although this migration is very short range. The Colorado DOW has installed several feeding stations for the birds in winter, placing baled wheat straw above the normal snow depth.

Several conflicts presently exist between wildlife and the urban environment. When concentrated in relatively small snow-free zones, the herds are particularly vulnerable to harassment by humans or dogs. If pursued, the deer and elk will use critical energy reserves floundering through deep snow to escape. In spring a traffic hazard is created by deer and elk crossing the highway below Animas Mountain as they seek out early green forage in the meadows below. Finally, motorized recreationists often drive their trail bikes to the very edge of the cliffs, or across the slopes below, disturbing nesting raptors.



HERMOSA-JUNCTION CR. ELK TREND

Helicopter

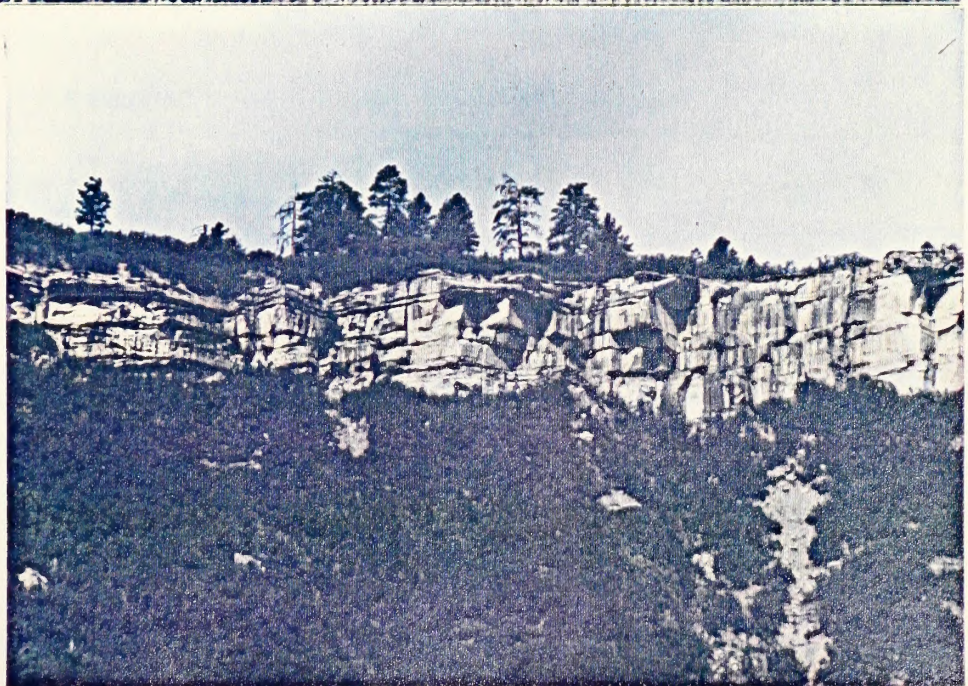
GMU 74

1. Lightner Cr.
2. Junction Cr.
3. Animas Mountain
4. Buck Cr.
5. Clear Cr.
6. South Fork
7. Hope Cr.-Cross Cr.
8. Cross Cr.-Deer Cr.
9. Elk Cr.
10. Elk Cr.-Hermosa

Figure 2

Fenced private parcel on Dry Fork of Lightne Creek

Habitat site P022 - predominately Stipa comata



Barnroof Point: east side, golden eagle eyrie

Turkey Vulture using snag in Ponderosa pine type

Dry Fork of Lightner Creek, broken dam

Dry Fork of Lightner Creek, above broken dam

HABITAT SITE PO 01
ANIMAS MOUNTAIN

HABITAT SITE PO 17
PERINS COAL MINE SITE

PEREGRINE FALCON EYRIE

Habitat site
P009 - meadow
along Dry Fork
of Lightner Creek

MANAGEMENT OBJECTIVES

III. Management Objectives

A. Raptors

R1. Maintain at least one successfully breeding pair of peregrine falcons.

R2. Maintain and protect at least six raptor nesting sites and two linear miles of suitable nesting cliffs.

B. Winter Range - Big Game

WR1. Maintain big game migration corridors to existing winter range as shown on the Wildlife Inventory Map.

WR2. Maintain integrity of present winter use areas including about 1,200 acres of private lands and 2,600 acres of public and state lands.

WR3. Provide sufficient winter habitat to support approximately 1,200 elk and 3,000 mule deer on a sustained basis and 2,000 elk and 5,000 mule deer in critical years. This includes the following site specific habitat objectives which will be obtained through vegetation treatments as described in Section V, Planned Actions. Because some of the listed objectives involve maintaining brush in a juvenile stage, it may be necessary to repeat treatment projects periodically. (Composition, utilization, and density objectives are listed in Appendix C, Habitat Site Descriptions):

a. Site P001 PIPO--QUGA--MSA Ponderosa pine - Oakbrush - Mesa. Increase and maintain the composition of young sprouts and preferred browse species on approximately 100 acres to offset loss of winter range to subdivision.

b. Site P017 QUGA--SYOR--BNC Oakbrush - Snowberry - Bench. Increase native grasses and forbs, reduce brush to a more palatable juvenile stage, increasing deer and elk use. Rehabilitate disturbed portions of the site.

c. Site P019 QUGA--SYOR--RDG Oakbrush - Snowberry - Ridge. Reduce the height and density of the oakbrush, increasing understory diversity and forage availability. Increase deer and elk use.

d. Site P022 QUGA--SYOR--RDG Oakbrush - Snowberry - Ridge. Maintain present composition and forage availability. This site was previously treated by chaining and fertilization by Colorado DOW.

e. Site P012 JUSC--QUGA--RDG Juniper - Oakbrush - Ridge. Increase grass and forb composition and correct game trail erosion.

f. Site P023 JUSC--QUGA--RDG Juniper - Oakbrush - Ridge. Reduce the height of browse plants, encourage sprouting and open the understory for increased production of grass and forbs.

g. Site P013 STCO--BOGR--BNC Needle & Thread - Bluegrama - Bench. Increase desirable native grasses and reduce invading species of undesirable shrubs and forbs to improve fall-spring forage.

h. Site P025 JUNC--MUAS--WMR Juncus - Alkali Muhly - Wet Meadow. Maintain meadow composition except increase food and cover for small birds and mammals on edges by introducing shrubs and trees.

i. Site P027 BRIN--AGRO--VAL Brome - Wheatgrass - Valley. Maintain native grass and forb cover in meadow.

j. Site P009 BRIN--POA --VAL Brome - Bluegrass - Valley. Maintain meadow composition while increasing food and cover for nongame wildlife along roadside.

C. Habitat Improvements

HI1. Enhance habitat suitability on 6,500 acres for nongame birds and small mammals by:

a. Increasing the amount, distribution, and length of seasonal availability of free water.

b. Increasing food, cover, and spatial diversity where lack of such components are limiting. Presently, two sites totalling 70 acres have been identified.

c. Restoring native and/or suitable vegetation to areas denuded by disturbance.

HI2. Stabilize soils in 40 acres of gullies and intermittent stream channels by halting bank cutting and sloughing.

HI3. Repair and prevent erosion damage to 4 miles of roads and trails.

HI4. Correct big game traffic hazard problem on Animas Mountain.

D. Public Access

PA1. Provide public access for game harvest and recreation while preventing human disturbance to nesting raptors and wintering big game.

PA2. Reduce surface damage and disturbance to wildlife by improving control of off road vehicle use.

CONSTRAINTS

IV. Constraints

The Durango-Chromo Planning Unit's Management Framework Plan (MFP) was officially accepted in 1975. Following is a summary of MFP Step II multiple use recommendations which were accepted as management decisions and which serve as constraints on HMP implementation.

A. Consider transferring administration of Public Lands on Animas Mountain and Perins Peak to Colorado DOW by cooperative agreement or fee title exchange for other lands. (Both BLM and DOW have now agreed that the greatest benefit to wildlife could best be achieved through cooperative planning and Sikes Act implementation).

B. Public Lands will remain open to mineral leasing and timber harvest subject to protective stipulations listed under Decisions M1.1, M2.1, M3.1, RM1.3a, W2.2, and WL1.5.

C. Grazing on Public Lands will be restricted to cattle only, with season of use being May 1 - October 15.

D. Jeep trails on Perins Peak and Animas Mountain should be closed to off-road vehicles when funding and manpower become available.

E. Constraints required in the American Antiquities Act, Endangered Species Act, Bald Eagle Act, and other Federal and State laws protecting migratory birds and other game and nongame species are also pertinent to this plan.

PLANNED ACTIONS

V. Planned Actions

Specific objectives that are served by the planned actions are listed in parenthesis following the statement of the planned action.

A. Direct Actions

1. Contract for research to:

   a. Monitor all falcon eyries to determine production and period of use. (R1 & R2)

   b. Determine hunting areas of peregrine and prairie falcons. (R1)

   c. Determine prey species being utilized by peregrines. (R1)

   d. Collect and test prey species for pesticide contamination. (R1 & R2)

   e. Band prey species and record migration. (R1)

2. Contract raptor biologist through Peregrine Falcon Recovery Team to:

   a. Manipulate eggs and young in peregrine nest, or

   b. Initiate efforts to cross foster peregrine young in prairie falcon eyrie, or

   c. Release peregrine young by hacking method at cliff sites. (R1)

3. Initiate and maintain yearly nesting and production records for all falcon and eagle eyries. (R1 & R2)

Habitat Improvements (refer to Habitat Improvement Project Map):

4. Improvement 1 - install watering device at north end of Animas Mountain. (HI1)

5. Improvement 2 - Construct 1 3/4 miles of boundary fence on Public Lands and sign. (R1, R2 & PA2)

6. Improvement 3 - Reseed two miles of jeep trails on Perins Peak with grass- forb mixture and fence two access points. (R1, R2, PA3 & HI3)

7. Improvement 4 - Reseed two miles of jeep trails on Animas Mountain with grass-forb mixture and fence access point. (R2, PA2 & HI3)

8. Improvement 5 - Install a traffic gate on Perins Peak access road at site 5 or 5a. (R2, HI3 & PA2)

9. Improvement 6 - Repair spring development on Barnroof Point, install water trough and pipe overflow to a second guzzler. (HI1)

10. Improvement 7a and 7b - Construct two rock gabions on Dry Gulch Gully. (HI2)

11. Improvements 8a, b, c, d, and e - Construct five rock gabions on Dry Fork of Lightner Creek and tributary gullies. (HI2)

12. Improvement 9 - Install water collection device on rock check dam in Dry Gulch and pipe to storage tanks and guzzlers. (HI1)

13. Improvements 10a, b, c, d, and e - Install water collection devices on rock check dams in Dry Gulch and pipe to storage tanks and guzzlers. (HI1)

14. Plan and install permanent water sources to achieve a density of two sources per square mile. (HI1)

15. Construct big game control fence along 1 1/2 miles of highway at Animas Mountain.

Vegetation Treatments (refer to Habitat Site and Study Area Map):

16. Contract for 100 acres of brush treatment on site P001, using small tractor equipped with brush beater. (WR3a)

17. Contract bulldozer to grade spoil pit on old mining site P017 and crush shrubs in 50 acres of meadow. (WR3b)

18. Seed reclaimed surface with grass-forb mixture and fertilize the entire meadow. (WR3b)

19. Hand-treat (chainsaw) 15 acres of oakbrush in 100 foot wide strips and an additional 15 acres after 2-3 years leaving 100 foot strips of uncut brush between staggered treatment sections on site P019.

20. Seed grass-forb mixture and construct rock check dams on eroding game trails on site P012. (WR3e & HI3)

21. Hand-treat (chainsaw) 35 acres of oakbrush in alternate 2 or 3 acre blocks on site P023. (WR3f)

22. Reseed meadow on site P013 with native grasses and forbs. (WR3g & HI1c)

23. Plant aspen, dogwood, rose, and black chokecherry along southern and eastern borders of meadow on site P025. (WR3h & HI1)

24. Plant Russian olive, black chokecherry, and bessey cherry along roadside in meadow site P009. (WR3j & HI1)

B. Supporting Actions

Conservation Easements and Land Acquisition (refer to Conservation Easements and Acquisitions Map):

1. Acquire conservation easement or fee title on 140 acres in area C-1 to provide foot trail access to Animas Mountain and prevent further development in migration corridor. (WR1 & PA1)

2. Acquire conservation easement or fee title on 40 acres in area C-2 to prevent further development in migration corridor. (WR1)

3. Acquire conservation easement or fee title on 260 acres in area C-3 to prevent further development in migration corridor and wintering area. (WR1, WR2 & WR3).

4. Coordinate with County Planning Commission or acquire conservation easement on 180 acres in area C-4 to prevent further development. (WR1, WR2 & WR3)

5. Coordinate with County Planning Commission or acquire conservation easement on 130 acres in area C-5 to limit housing development to the base of slopes. (WR1, WR2 & WR3)

6. Acquire fee title by land exchange or purchase on 300 acres in area A-1. (WR1, PA1, PA2, WR2 & WR3)

7. Acquire fee title by land exchange or purchase on 120 acres in area A-2. (WR2 & WR3)

8. Acquire fee title by land exchange or purchase on 80 acres in area A-3. (WR2, WR3 & PA2)

9. Process proposed land exchange for 120 acres in area A-4. (WR2 & WR3)

10. Process proposed land exchange for 80 acres in area A-5. (WR2 & WR3)

11. Acquire conservation easement to eliminate grazing on 2.5 acres of stream bed in area C-6. (HI2)

C. Mitigation and Protection Measures

1. Coordinate planning efforts with Animas Regional Planning Commission and County Commissioners. (WR1 & WR2)

2. Implement Durango-Chromo MFP recommendations to close jeep trails in the WHA. (PA1, PA2, R2 & HI3)

3. Close portions of the area seasonally if human disturbance threatens sensitive wildlife. (R1, R2 & WR3)

4. Close all public lands within the Wildlife Habitat area to motorized vehicle use.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

HABITAT MANAGEMENT PLAN PROGRESS REPORT

OBJECTIVES	DATE COMPLETED	PLANNED ACTIONS	DATE COMPLETED	EVALUATIONS	DATE COMPLETED
R1 Maintain at least one successfully breeding pair of peregrine falcons.				Annual nest use & success checks (DOW) Incorporate Study Data in HMP	
		1. Contract for research to: a. Monitor falcon and eagle eyries to determine production periods of use. b. Determine hunting area. c. Determine prey species utilized by peregrines. d. Collect and test prey species for pesticide contamination. e. Band prey species and record migration.			
		2. Contract raptor biologist for: a. Manipulation of eggs and young in peregrine		Check for egg or nestling survival (DOW)	

INSTRUCTIONS

1. List specific objectives as developed in MFP or as otherwise approved.
2. List specific planned actions to be initiated to meet each specific objective.
3. List scheduled studies and evaluations planned in evaluating accomplishments.
4. Enter date that each objective, action, or evaluation is accomplished.

GPO 838 - 506

Form 6620-3 (December 1976)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

HABITAT MANAGEMENT PLAN PROGRESS REPORT

OBJECTIVES	DATE COMPLETED	PLANNED ACTIONS	DATE COMPLETED	EVALUATIONS	DATE COMPLETED
R1 Continued		nest, or b. to initiate cross fostering of peregrine young in prairie falcon nest or, c. to release peregrine young by hacking method at cliff site.		Band Nestlings (DOW)	

INSTRUCTIONS

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	OBJECTIVES	DATE COMPLETED	PLANNED ACTIONS	DATE COMPLETED	EVALUATIONS	DATE COMPLETED
R2	Maintain and protect at least six raptor nest sites and two linear miles of suitable nesting cliffs.		Initiate and maintain nesting and production records for all falcon and eagle eyries. 1. Close jeep trails on Perins Peak by fencing access points. 2. Close jeep trails on Animas Mountain by fencing access points. 3. Construct traffic control gate on Perins Peak access road. 4. Construct boundary fence on east border of Perins Peak sector.		Annual check of nest use and success (BLM)	
WR1	Maintain big game migration corridors to existing winter range.				Annual track and pellet counts	
			Acquire conservation easements to prevent further development in the following areas (see map)		Periodic compliance checks	

INSTRUCTIONS

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OBJECTIVES	DATE COMPLETED	PLANNED ACTIONS	DATE COMPLETED	EVALUATIONS	DATE COMPLETED
WR1 Continued		C1 - 140 acres C2 - 40 acres C3 - 260 acres C4 - 180 acres C5 - 130 acres			
WR2 Maintain integrity of present winter use areas for big game.		Acquire fee title by land exchange or purchase on following areas (see map) A1 - 300 acres A2 - 120 acres A3 - 80 acres A4 - 120 acres A5 - 80 acres		Annual aerial trend counts for elk (DOW) Pellet count for deer and elk (BLM & DOW) Five annual Ten additional each three years	

INSTRUCTIONS

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HABITAT MANAGEMENT PLAN PROGRESS REPORT

OBJECTIVES	DATE COMPLETED	PLANNED ACTIONS	DATE COMPLETED	EVALUATIONS	DATE COMPLETED
WR3 Provide sufficient winter habitat to support 1,200 elk and 3,000 mule deer on a sustained basis and 2,000 elk and 5,000 mule deer in critical years.				Five annual extensive transects for vegetation utilization by BLM & DOW Ten browse condition and trend transect each third year (BLM)	
a. Site P001 PIPO--QUGA--MSA Increase the composition of young sprouts and preferred browse sepcies.		Treat 100 acres of brush with small tractor and brush beater.		200 point vegetation composition transect on years 2, 5 & 7 after treatment (BLM) Compare to habitat site description tables	
b. Site P017 QUGA--SYMP--BNC Increase native grasses and get brush back to juvenile stage. Rehabilitate disturbed portion of site.		Grade coal mine spoils pit. Crush 50 acres of brush in meadow. Seed reclaimed surface with grass-forb mixture and fertilize entire meadow.		" "	

INSTRUCTIONS

1. List specific objectives as developed in MFP or as otherwise approved.
2. List specific planned actions to be initiated to meet each specific objective.
3. List scheduled studies and evaluations planned in evaluating accomplishments.
4. Enter date that each objective, action, or evaluation is accomplished.

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HABITAT MANAGEMENT PLAN PROGRESS REPORT

OBJECTIVES	DATE COMPLETED	PLANNED ACTIONS	DATE COMPLETED	EVALUATIONS	DATE COMPLETED
WR3 Continued					
c. Site P019 QUGA--SYMP--RDG Reduce the height and density of the oakbrush, increasing understory diversity and forage availability. Increase deer and elk use.		Hand-treat (chainsaw) 15 acres of oakbrush in 100 foot wide strips and an additional 15 acres after 2-3 years leaving 100 foot strips of uncut brush between staggered treatment sections on Site P019.		" "	
d. Site P022 QUGA--SYMP--RDG Maintain present composition and forage availability. This site was previously treated by chaining and fertilization by Colorado DOW.		No immediate action necessary.		" "	

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OBJECTIVES	DATE COMPLETED	PLANNED ACTIONS	DATE COMPLETED	EVALUATIONS	DATE COMPLETED
WR3 Continued					
e. Site P012 JUSC--QUGA--RDG Increase grass and forb composition and correct game trail erosion.		Seed grass-forb mixture and construct rock check dams on eroding game trails on Site P012.		" "	
f. Site P023 JUSC--QUGA--RDG Reduce the height of browse plants, encourage sprouting and open the understory; for increased production of grass and forbs.		Hand-treat (chainsaw) 35 acres of oakbrush in alternate 2 or 3 acre blocks on Site P023.		" "	
g. Site P013 STO--BOGR--BNC Increase desirable native grasses and reduce invading species of undesirable shrubs and forbs.		Reseed meadow on Site P013 with native grasses and forbs.		" "	

INSTRUCTIONS

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OBJECTIVES	DATE COMPLETED	PLANNED ACTIONS	DATE COMPLETED	EVALUATIONS	DATE COMPLETED
WR3 Continued					
h. Site P025 JUNC--MUAS--WMR Maintain meadow composition except increase food and cover for small birds and mammals on edges by introducing shrubs and trees.		Plant aspen, dogwood, rose, and black chokecherry along southern and eastern borders of meadow on Site P025.			
i. Site P027 BRIN--AGRO--VAL Maintain native grass and forb cover in meadow.					
j. Site P009 BRIN--POA--VAL Maintain meadow composition while increasing food cover for nongame wildlife along roadside.		Plant Russian olive, black chokecherry, and bessey cherry along roadside in meadow Site P009.			

INSTRUCTIONS

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OBJECTIVES	DATE COMPLETED	PLANNED ACTIONS	DATE COMPLETED	EVALUATIONS	DATE COMPLETED
HI1 Enhance habitat suitability on 6,500 acres for nongame birds and small mammals by:				Breeding bird census and small mammal trapping before improvements and every 5 years after improvements. TN 307	
a. Increasing the amount, distribution, and length of seasonal availability of free water.		Improvement 1 - Install watering device on north end of Animas Mountain. Improvement 6 - Repair spring development on Barnroof Point, install water trough and pipe overflow to a second guzzler. Improvement 9 - Install water collection devices on rock check dam in Dry Gulch and pipe to storage tank and guzzler.		Photo evaluation process Annual maintenance inspection Annual maintenance inspection	

INSTRUCTIONS

1. List specific objectives as developed in MFP or as otherwise approved.
2. List specific planned actions to be initiated to meet each specific objective.
3. List scheduled studies and evaluations planned in evaluating accomplishments.
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HABITAT MANAGEMENT PLAN PROGRESS REPORT

OBJECTIVES	DATE COMPLETED	PLANNED ACTIONS	DATE COMPLETED	EVALUATIONS	DATE COMPLETED
HI1 Continued					
b. Increasing food, cover, and spatial diversity where lack of such components are limiting.		Improvements 8a, b, c, d & e - Install water collection devices on rock check dams in Dry Gulch and pipe to storage tanks and guzzlers.			
c. Restore suitable vegetation to areas denuded by disturbance.		Plan and install permanent water sources to achieve a density of two sources per square mile.		Annual maintenance inspections.	
HI2 Stabilize soils in gullies and intermittent stream channels.				Install erosion stakes and sediment measuring stakes Two year maintenance inspections	
		Improvement 7a and 7b - Construct two rock gabions on Dry Gulch Gully. Improvements 8a, b, c, d & e - Construct five rock gabions on Dry Fork of Lightner Creek and tributary gullies.			

INSTRUCTIONS

1. List specific objectives as developed in MFP or as otherwise approved.
2. List specific planned actions to be initiated to meet each specific objective.
3. List scheduled studies and evaluations planned in evaluating accomplishments.
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HABITAT MANAGEMENT PLAN PROGRESS REPORT

OBJECTIVES	DATE COMPLETED	PLANNED ACTIONS	DATE COMPLETED	EVALUATIONS	DATE COMPLETED
HI3 Repair and prevent erosion damage to roads and trails.		Improvement 4 - Reseed 2 miles of jeep trails on Animas Mountain with grass-forb mixture. Reseed 2 miles of jeep trails on Perins Peak with grass-forb mixture.		Install erosion stakes Check success of reseeding with photo plot	
HI4 Correct big game traffic hazard problem on Animas Mountain.		Improvement 11 - Construct 1 1/2 miles of big game control fence along highway at base of Animas Mountain.		Monitor road kills in area	
PA1 Provide public access for game harvest and recreation while preventing human disturbance to nesting raptors and wintering big game.		Construct parking area along Dry Fork access road and at south end of Animas		Install traffic counter and visitor register.	

INSTRUCTIONS

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HABITAT MANAGEMENT PLAN PROGRESS REPORT

OBJECTIVES	DATE COMPLETED	PLANNED ACTIONS	DATE COMPLETED	EVALUATIONS	DATE COMPLETED
PA1 Continued		Mountain.			
PA2 Acquire legal access to Animas Mountain.		Acquire conservation easement or fee title on 140 acres in area C-1 (see map page) to provide foot trail access to Animas Mountain and prevent further development in migration. Acquire fee title by land exchange or purchase on 300 acres in area A-1 (Dalla Property).			
PA3 Reduce surface damage and disturbance to wildlife by improving control of off road vehicle use.		Improvement 2 - Construct 1 3/4 miles of boundary fence on public lands and sign. Improvement 5 - Construct traffic gate on Perins Peak access road at site 5 or 5a.		Annual maintenance inspection.	

INSTRUCTIONS

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COORDINATION WITH OTHER PROGRAMS/AGENCIES

VI. Coordination With Other Programs and Agencies

A. Forest Management

All timber sales on public lands have been delayed until completion of a district forest management plan. Planning of sales on public lands in the WHA will be coordinated with the DOW, and subject to protective stipulations listed under Section IV. Constraints.

B. Minerals Development

Mineral development in the WHA is subject to protective stipulations listed under Section IV. Coal leasing in the area must await completion of an environmental statement, and is considered unlikely due to more economical sources available nearby. At the present time consideration for protective withdrawal is not necessary because of lack of proven economical resources, and/or lack of conflicting development interests.

C. Livestock Management

Livestock grazing privileges on public lands in the WHA have been retired due to the acquisition of base property by DOW. If the private land for which the remaining grazing privileges are licensed (on public land) is acquired for inclusion in the WHA, those grazing privileges will also be retired. Livestock grazing will be considered in cooperative planning as an alternative management tool to influence vegetational composition and vigor.

D. Recreational Management

It is the intent of the BLM and DOW to allow full range of recreational use of the WHA so long as such activities do not detract from the unique value of the area to wildlife. The primary reasons for the purchase of DOW lands were to preserve critical big game winter range and critical nesting habitat for endangered species. Public review comments on the BLM Durango-Chromo MFP stressed protection of critical winter range and sensitive wildlife species. Both agencies are constrained by State and Federal laws to protect wildlife under their jurisdiction. Thus when public recreation conflicts seriously with the limited wildlife resource in this area, recreation must be restricted because the wildlife cannot go elsewhere. Recreation management in the WHA will seek to minimize serious conflicts.

E. Watershed Management

Several problems involving on-going erosion of roads and gullies have been identified in the WHA. Specific actions to reduce sediment load and reclaim disturbed areas are included as planned actions in Section V.

Provision of water resources for wildlife will involve construction of run-off retention ponds (stock ponds) and 'guzzlers", which will not require diversion of water sources or acquisition of additional water rights.

F. Support Activities

Most of the vegetation treatment and habitat improvement projects in this plan could best be implemented through coordination with the Young Adult Conservation Corps Work Program and YCC. Contract supervision will be necessary for the more complicated or large-scale projects. Negotiations for conservation easements will be handled by the Colorado Division of Wildlife. BLM lands and realty program support will be necessary for acquisition of five parcels of private property. Three of these parcels have been the subject of land exchange proposals and one other was offered for sale to DOW. Because current land prices are about $1,000 per acre, these parcels should be acquired by an accelerated exchange program.

Normal administrative and public notification procedures will be followed for closure of jeep trails on public lands.

ENVIRONMENTAL ANALYSIS
RECORD

VII. Environmental Assessment Record

An umbrella EAR, Number C-030-8-115, has been prepared for the Perins Peak HMP. Supplemental EARs will be prepared for individual projects in the future. The umbrella EAR is presented in the following pages.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

ACTIVITY 4350

EAR FACE SHEET

OFFICE: Montrose

FY & REPORT # CO-030-8-115

ACTION: Perins Peak Habitat Management Plan
(Project Name, Case Type, etc.)

NO. OF PAGES

LOCATION: T. 35 N., R. 10 W. & T. 35 N., R. 9 W.

SERIAL NO. C.-

REQUIRED BY 43 CFR 23: YES [ ] NO [X]

TEAM SIGNATURES:	TITLE	RESOURCE VALUES ASSIGNED	HOURS
Clair F. Burton	Wildlife Biologist	All	
Tiny A Reed	Wildlife Biologist	All	40
[illegible]	Range Conservationist		.5
Donald C Hoering	Realty Specialist	[illegible]	2.0
[illegible]	Recreation Specialist		
Richard S Crane	Landscape Architect		7.0
[illegible]	Archaeologist		1

ENVIRONMENTAL COORDINATOR: [illegible] (Signature) 9-22-78 (Date)

COMPLIANCE OFFICER: [illegible] San Juan Resource Area Manager (Title or Name)

DISTRICT MANAGER: [illegible] (Signature)

November 1, 1978 (Date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

ACTIVITY 4350

EAR FACE SHEET

OFFICE: _____ FY & REPORT # _____

ACTION: Perins Peak Habitat Management Plan NO. OF PAGES _____
(Project Name, Case Type, etc.)

LOCATION: _____ SERIAL NO. C.- _____

REQUIRED BY 43 CFR 23: YES ☐ NO ☐

TEAM SIGNATURES:	TITLE	RESOURCE VALUES ASSIGNED	HOURS
Helen Hankins	Geologist	Minerals	1
Steven M. Jones	Hydrologist	Water Resources	3

ENVIRONMENTAL COORDINATOR: _____ _____
(Signature) (Date)

COMPLIANCE OFFICER: Jerry D. Tyndrick
San Juan Resource Area Manager
(Title or Name)

DISTRICT MANAGER: Gordon Fowler
(Signature)

November 11, 1978
(Date)

IN REPLY REFER TO

1790
(164)

United States Department of the Interior

BUREAU OF LAND MANAGEMENT

District Office
P. O. Box 1269
Montrose, Colorado 81401

Date:

Memorandum

To: District Manager, Montrose

From: Area Manager, San Juan Resource Area

Subject: EAR, Perins Peak Habitat Management Plan

The environmental impacts associated with the proposed action have been assessed. It is concluded the proposed action is not a major Federal action significantly affecting the quality of the human environment and that preparation of an environmental impact statement pursuant to Section 102(2)(C) of the National Environmental Policy Act of 1969 is not recommended.

Jerry D. Sandfuchs
Area Manager

I CONCUR: Marilyn Y. Jones
District Manager

CONSERVE AMERICA'S ENERGY

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ENVIRONMENTAL ASSESSMENT RECORD

Perins Peak Habitat Management Plan

CO-03-WHA-T1

I. DESCRIPTION OF THE PROPOSED ACTION

The proposed action is to implement the Perins Peak Habitat Management Plan (HMP) and to complete all habitat manipulation projects and support actions described in that document. The goals of this plan are: (1) to maintain or improve wildlife habitat in the area by providing an interspersed variety of vegetation types and successional stages, and sufficient water sources to allow wildlife to exploit the habitat; (2) to improve the productivity and soil stability of the area by reclaiming disturbed sites and taking measures to control erosion; (3) to protect the habitat area and wildlife from destructive disturbance by trail bikes and other off-road vehicles; and (4) to implement the Peregrine Falcon Recovery Plan by studying and manipulating the falcon populations in the area. A complete listing of projects and actions is contained in Section V (Planned Actions) of the subject HMP.

II. DESCRIPTION OF THE ENVIRONMENT AFFECTED

A description of the area impacted by the proposed action is contained in Sections I and II (Introduction) of the HMP.

No agricultural lands or potential wilderness or roadless area will be affected by the proposal. No archaeological inventory has been made of the area, but "Basketmaker" cultural sites have been found in the vicinity of Animas Mountain on private lands.

Formal Section 7 consultation with USFWS will be requested for endangered species (American peregrine and bald eagle) when the HMP is signed.

Flood plains have not been designated for the WHA. Flood hazard evaluation and storm intensity and frequency data will be requested and incorporated into the design of rock gabions.

There is one grazing allotment which covers 520 acres of public lands in the wildlife habitat area (WHA). Currently, only 160 acres are utilized due to lack of water source and steep slope on the remaining acreage. An additional 140 acres are potentially available to cattle if water were made available. The present grazing system sets season of use to be compatible with the complementary to big game winter range management.

III. ANALYSIS OF THE PROPOSED ACTION AND ALTERNATIVES

A. The proposed action is to implement the Perins Peak Habitat Management Plan.

1. Unmitigated Impacts

During the installation of water tanks and guzzlers, some soil and vegetation disturbance will occur. Small areas will be cleared of vegetation to make room for the tanks. Some additional soil and vegetation disturbance will be caused by big game and livestock using the water sources. Vegetation treatment projects will alter the age structure and species composition in some areas, directly benefiting some species of wildlife while reducing habitat values for others. Some projects are designed to increase grass, forb, and seed production. Others are intended to provide low growing brushy forage for big game where tall, mature shrubs have become dominant. The effect will be to maintain or replace open areas and the immature shrub component of the habitat. Other vegetation projects will introduce a new component, such as the spatial diversity of trees, or cover and mast crops of berry producing shrubs where none presently exist. This will allow some wildlife species to invade new sites and utilize areas otherwise unavailable to them.

Seasonal occupancy of these sites by wildlife may be altered by the vegetation changes. Replacement of mature oakbrush by young sprouts eliminates a local source of fall mast crops for turkeys, while providing forage for deer and elk. The young brush stage provides an important component of brood cover and feeding area for turkeys in spring and early summer.

Providing water sources will allow free-water dependent wildlife species to invade a site they could not have utilized previously. In some cases, this could cause interspecific competition. The overall effect of the water developments should be a greater diversity, enhanced production, and more complete utilization of the habitat.

Presence of work crews and equipment will cause localized disturbance and harassment of wildlife during the installation or treatment phase of project actions. These will be relatively short term; a matter of a few days on any one project. Research biologists would be in the WHA for an entire field season gathering data, and would also cause some disturbance to wildlife. Trapping and banding of

migratory and resident bird species does not significantly interfere with the birds' normal activities. Collection of a small sample of these birds for pesticide analysis would cause a limited, short term reduction of these populations locally. This would involve seven individuals each of five to ten prey species. Nestling and egg exchanges, would necessarily mean disturbance of the falcons at their eyrie sites, can be carried out by trained biologists without causing harm to the birds, and have been used successfully to supplement natural reproduction.

Closing and reseeding of jeep trails and installation of rock gabions on gullies will decrease erosion and lessen sediment load in streams. This will also put more land surface into production of forage and cover. The rock gabions will have the secondary effect of raising the water tagle and increasing the productivity of the surrounding meadows.

Some negative visual impact will be created by the introduction of fences, watering devices, and brush treatment slash. Any fences or gates will remain as permanent intrusions, but the visual impact of brush treatments should be obscured by regrowth in about three years.

Installation of any project would be preceded by site clearance by an archaeologist to prevent destruction of any cultural artifacts.

Existing regulations and MFP decisions regarding off-road vehicles will be implemented and enforced. Off-road vehicle use will be restricted to designated roads through improved fencing and traffic control gates. While this may generate some public resentment, such off road activity occurs in trespass at the present time because all access to public lands is through DOW or private lands.

Further regulation of recreational activity may become necessary if serious human - wildlife conflicts develop. This may generate additional public resentment locally. Closure of some areas to specific recreational activities would force people to go elsewhere for recreation. Although this might add a mile to the distance people must travel, adequate recreational lands exist just north of the WHA on National Forest Lands where the conflict with wintering big game would be considerably less.

Acquisition of conservation easements or fee title on the land areas identified in the HMP would not have any direct environmental impact on the area. Migration corridors and essential big game winter range would be protected from further development. Acquisition would also allow effective management and treatment of the habitat involved, as well as providing legal public access to Animas Mountain.

Acquisitions would indirectly impact the socioeconomic environment by limiting development in and around the WHA. This would primarily cause a displacement of residential housing development to other nearby lands.

2. Possible Mitigating Measures

The primary negative impacts associated with the proposed action are the visual impacts and short term disturbance of wildlife caused by the different projects. Visual impacts of structures such as water tanks and guzzlers could be reduced by partial or complete burial of the tank, and by using natural vegetation to screen the location. Fences and other above ground structures could be constructed of natural materials or painted to reduce conspicuous appearance. Brush treatments should be designed to create irregular opening edges, and to leave blocks of undisturbed vegetation. Slash should be completely knocked down to hasten decomposition and lessen obstruction. Small vegetation projects and construction projects could be accomplished without construction of roads or trails by utilizing manpower of cooperative programs such as Young Adult Conservation Corps.

Disturbance of wildlife could be reduced by timing projects to avoid peak breeding seasons in spring and early summer, and to avoid the late fall big game migrations.

BLM land exchange efforts could reduce the impact of limitations on residential expansion by providing suitable lands which have been identified for exchange in the Durango-Chromo MFP.

3. Adverse Impacts That Cannot Be Avoided

The following unavoidable adverse impacts are anticipated:

a. Visual intrusion of new fences, traffic gates, watering devices, and brush treatment sites.

b. Short term disturbance of wildlife by work crews.

c. Collection of seven individual birds of each of 5-10 prey species for purposes of pesticides analysis.

d. Short term erosion impacts from installation of watering devices, fences, and vegetation treatments.

e. Displacement of some recreational activities to other public and private lands.

4. Relationship Between Short-Term Use and Long-Term Productivity

Vegetation manipulation projects in the plan will revert a small part of the habitat to a juvenile brush stage, an ecosystem component which is slowly being lost due to the exclusion of wildfire.

These projects are planned in deer and elk winter concentration areas where the maximum benefit can be achieved, and the juvenile stage maintained by the browsing herds. This should help prevent over-utilization of the presently limited available browse plants. The interspersion of a variety of habitat types in different stages of growth along with adequate water sources should increase the long term productivity and seasonal utility of the habitat area for wildlife. As more of the surrounding areas are developed, more animals will be displaced into the WHA. Habitat enhancement should increase the carrying capacity of the WHA to compensate for some of the losses outside.

Regulation of public recreational use will slightly increase user density on outside areas, but will reduce recreation-wildlife conflicts in critical areas during periods when the animals are concentrated and highly vulnerable to disturbance.

5. Irreversible and Irretrievable Commitment of Resources

None

B. Alternative - No Action

The "No Action" alternative would result in no direct additional environmental impact. Indirectly, it would result in the continuing loss of the low brush forage component from the WHA ecosystem, lowering winter carrying capacity for big game. This, along with continued loss of surrounding winter range on private lands and impairment of still more winter range by loss of migration corridors, could result in severe habitat degradation in the last remaining areas. This in turn would lead to winter starvation and reduction of the big game herds. Loss of big game would directly reduce local and state income generated by license fees and hunter and tourist spending.

Since the lowland habitat near natural water sources is being most rapidly developed, and the water itself being removed for municipal and agricultural needs, those species dependent upon this habitat are either displaced or lost. These species are the small birds and mammals which serve as the prey base for raptors and other predators. Thus, failure to enhance the WHA carrying capacity for these species by providing water sources may indirectly limit the available prey base and affect the success of the predators.

Failure to implement recovery efforts for the Peregrine falcon may result in a long term loss of the species in the WHA. Re-colonization would be dependent upon expanding populations elsewhere.

IV. PUBLIC INTEREST AND/OR CONTROVERSY

Strong public support for protection of the wildlife resource, particularly big game and sensitive raptor species, was expressed at public review meetings for the Durango-Chromo MFP. Colorado DOW, BLM, and USFS personnel have provided input and support for the HMP.

While some negative public reaction to closing jeep trails on Animas Mountain and Perins Peak may result, control of off-road vehicles was another area of considerable public concern at the MFP review meetings. The negative reaction would come from that portion of the public which is unaware of existing regulations or disposed to disregard those regulations until physically restrained.

V. RECOMMENDATIONS OF PREFERRED ACTION

It is recommended that the actions covered in Section V (Planned Actions) of the Perins Peak HMP be implemented as scheduled.

IMPLEMENTATION SCHEDULE AND COST ESTIMATE

VIII. Implementation Schedule and Cost Estimate

The following tabular summary presents man months and costs required to implement the Habitat Management Plan. Costs are arranged by accomplishment year, planned action and units to be completed. Individual Job Documemtation Reports (JDR's) follow the table and give specific details on a project-by-project basis.

YEAR 1

Action/Code	MM/$	Procurement	Equipment	Total	Units
Contract for Monitoring Studies & Reintroduction 4350 5825	2/4600	$10,000		$14,600	1 study
Perins Road Clusure and Stabilization 4350 5861	1/2300	$ 600		$ 2,900	1 road
Perins Brush Treatment 4350 5555	1/2300	$ 2,000		$ 4,300	50 acres
Perins Shrub Planting 4350 5855		$ 2,400		$ 2,400	10 acres
Barnroof Spring 4350 5857	1/2300	$ 3,700		$ 6,000	1
Exchange (A-1) & Analyze Other Exchanges & Agriculture 4210 3133	4/4600			$ 9,200	

YEAR 2

Action/Code	MM/$	Procurement	Equipment	Total	Units
Perins Gabious and Guzzlers 4340 5357 4350 5857	2/4600	$12,000		$16,600	13 waters
Lightner Shrub Planting 4350 5855	1/2300	$ 3,000		$ 5,300	5 acres
Animas Brush Treatment 4350 5555	1/2300	$ 2,400		$ 2,700	100 acres
Animas Catchment 4350 5557		$ 4,000		$ 4,000	1 water
Animas Fence 4350 5560	1/2300	$20,000		$22,300	1.5 mile
Peregrine Reintroductions 4350 5825	1/2300	$ 5,000		$ 7,300	1 pair
Continue Exchange & Acquisitions	2/4600	unknown		$ 4,600+	---
Prepare Plan for Other Waters	1/2300	---		$ 2,300	---

YEAR 3

Action/Code	MM/$	Procurement	Equipment	Total	Units
Perins Mine Reclamation 4350 5555	1/2300	$ 3,900		$ 6,200	60 acres
Animas Road Stabilization & Closure & Parking Area 4350 5555	1/2300	$ 600		$ 2,700	1 road
Perins Fence 4350 5860	1/2300	$ 5,500		$ 7,800	1.75 mile
Perins Seeding & Erosion Control 4350 5555	---	$ 700		$ 700	10 acres
Continue Exchange & Acquisitions	2/4600	unknown		$ 4,600+	---
Peregrine Reintroductions	1/2300	$ 5,000		$ 7,300	1 pair
Continue Water Developments	1/2300	$10,000		$12,300	4 waters

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

JOB DOCUMENTATION REPORT

I – GENERAL DESCRIPTION — Card 1

5. Job Name (11–30): Perins Brush Treat.

LOCATION CODES

6. Special Project Code (31–34)
7. Planning Unit (35–36)
8. Sub-Basin (37–38) 9. County (39–41)
10. Watershed No. (42–44)
11. Allotment No. (45–48)
12. Wildlife Habitat Area (49–51)

SITE AND VEGETATIVE DESCRIPTION

13. Present SSF (52–53) 14. % Slope (54–55)
15. Exposure (56) 16. Soil Texture (57)
17. Precipitation (inches) (58–59)
18. Elevation (feet) (60–64)
19. Vegetative Subtype (65–67)

COMPOSITION *(Percent)*

20. Grasses (68–69) 21. Forbs (70–71)
22. Browse (72–73)

COVER *(Percent)*

23. Vegetative (74–75) 24. Litter (76–77)
25. Bare Ground (78–79)

II – ANNUAL WORK PLAN INPUT DATA — Card 2

75. Subactivity (11–14): 4350
76. Work Job Code (15–18): 5555

UI PLANNED

77. Primary (19–24): 50.
78. Secondary (25–29)

TIME OF AWARD

79. Fiscal Year (30–31) 80. Third (32)

TIME OF COMPLETION

81. Fiscal Year (33–34) 82. Third (35)

BLM COST 83. Method (36)

84. Material (37–41)
85. Contract (42–47)

CONTRIBUTED COST

86. Material (48–52)
87. Labor/Equipment (53–57)

MAINTENANCE

88. Responsibility (58) 89. Cycle (59–61)

JOB IDENTIFICATION

1. State (2–3)
2. District (4–5)
3. Job No. (6–9)
4. Transaction Code (10)

III – JOB DETAILS AND BENEFITS — Card 3

37. Primary Job Objective (11)

PLANT AND PEST CONTROL

39. Chemical (12) 42. Method (13)
45. Mechanical – Method (14)

ARTIFICIAL REVEGETATION

47. Pounds Seed/Acre (15–17)
48. Seedlings/Acre (18–21) 49. Method (22)
51. AUM's Livestock Forage Added (23–26)
52. Future SSF (27–28)

WATERSHED TILLAGE 54. Method (29)

FACILITIES 55. Type (30) 56. Other Misc. (31)

WATER DEVELOPMENT/CONTROL

59. Structure Type (32)

STORAGE (Ac. Ft.) 60. Flood (33–38)
61. Silt (39–44)

WILDLIFE HABITAT DEVELOPMENT PROTECTION

62. Type (45–46) 63. Primary Species (47–49)
64. Animal Months (50–54)
65. Number Increase (55–59)
66. Pounds Fish Increase (60–64)
67. Rare/Endangered (65)

VISITOR DAYS ADDED 68. Fisherman (66–69)

69. Hunter (70–73) 70. Other (74–77)

IV – PROGRESS REPORT — Card 4

COMPLETION DATA

UNITS 90. Primary (11–16)
91. Secondary (17–21)

TIME 92. Fiscal Year (22–23)
93. Third (24)

94. Contract No. (25–29) CT

CONTRIBUTION DETAIL

95. Agreement (30) 96. Participant (31)
97. Contributor's Name (32–51)

CONTRIBUTIONS

98. Deposited (52–56)

Undeposited

99. Materials (57–61)
100. Labor/Equipment (62–66)

V – DETAIL ESTIMATE OF UNITS AND COSTS

WORK DESCRIPTION AND MATERIALS (a)	UNITS: EA. MILE, ETC. (b)	UNITS: COST (c)	BLM COSTS: MATERIALS (d)	BLM COSTS: CONTRACT (e)	COOPERATOR COSTS: MATERIALS (f)	COOPERATOR COSTS: LABOR (g)
Labor				$2000		
TOTALS Materials						
Labor/Equipment						54

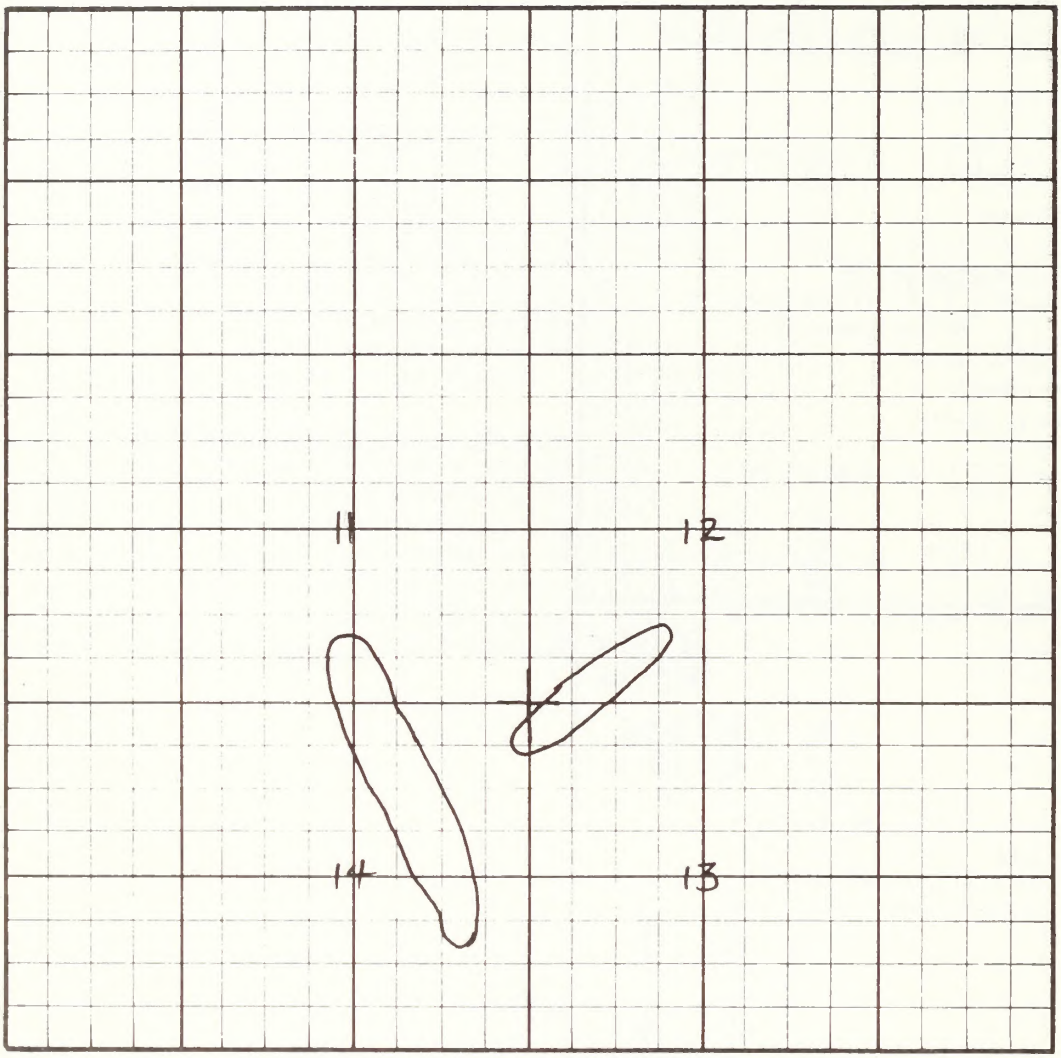
Form 1630-8 (February 1977)

JOB IDENTIFICATION STATE DISTRICT JOB NUMBER

VI – LOCATION PLAT

Scale 1 inch = 1/2 mile

T. 35N R. 10W Meridian



VII – NARRATIVE DESCRIPTION OR JUSTIFICATION

Hand treat a total of 50 acres within the 2 acreas using chainsaw (YACC) in small patches of 2-3 acres leaving 100 feet between treated areas. Too steep for equipment.

Prepared by	Title	Date
T. Reed	Wildlife Biol.	8-78
Approved by	Title	Date

GPO 839-264

Imp. 3&5

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

JOB DOCUMENTATION REPORT

JOB IDENTIFICATION

1. State (2–3) . . . CO
2. District (4–5) . . . 03
3. Job No. (6–9) . . .
4. Transaction Code (10) . . .

I – GENERAL DESCRIPTION — Card 1

5. Job Name (11–30) Perins Rd Stabil.

LOCATION CODES

6. Special Project Code (31–34) . . .
7. Planning Unit (35–36) . . .
8. Sub-Basin (37–38) . . . 9. County (39–41)
10. Watershed No. (42–44) . . .
11. Allotment No. (45–48) . . .
12. Wildlife Habitat Area (49–51) . . .

SITE AND VEGETATIVE DESCRIPTION

13. Present SSF (52–53) . . . 14. % Slope (54–55)
15. Exposure (56) . . . 16. Soil Texture (57) . . .
17. Precipitation (inches) (58–59) . . .
18. Elevation (feet) (60–64) . . .
19. Vegetative Subtype (65–67) . . .

COMPOSITION *(Percent)*

20. Grasses (68–69) . . . 21. Forbs (70–71) . . .
22. Browse (72–73) . . .

COVER *(Percent)*

23. Vegetative (74–75) . . . 24. Litter (76–77) . . .
25. Bare Ground (78–79) . . .

II – ANNUAL WORK PLAN INPUT DATA — Card 2

75. Subactivity (11–14) . . . 4350
76. Work Job Code (15–18) . . . 5861

U PLANNED

77. Primary (19–24) . . .
78. Secondary (25–29) . . .

TIME OF AWARD

79. Fiscal Year (30–31) . . . 80. Third (32) . . .

TIME OF COMPLETION

81. Fiscal Year (33–34) . . . 82. Third (35) . . .

BLM COST 83. Method (36) . . .

84. Material (37–41) . . .
85. Contract (42–47) . . .

CONTRIBUTED COST

86. Material (48–52) . . .
87. Labor/Equipment (53–57) . . .

MAINTENANCE

88. Responsibility (58) . . . 89. Cycle (59–61) . . .

III – JOB DETAILS AND BENEFITS — Card 3

37. Primary Job Objective (11) . . .

PLANT AND PEST CONTROL

39. Chemical (12) . . . 42. Method (13) . . .
45. Mechanical – Method (14) . . .

ARTIFICIAL REVEGETATION

47. Pounds Seed/Acre (15–17) . . .
48. Seedlings/Acre (18–21) . . . 49. Method (22) . . .
51. AUM's Livestock Forage Added (23–26) . . .
52. Future SSF (27–28) . . .

WATERSHED TILLAGE 54. Method (29) . . .

FACILITIES 55. Type (30) . . . 56. Other Misc. (31) . . .

WATER DEVELOPMENT/CONTROL

59. Structure Type (32) . . .

STORAGE (Ac. Ft.) 60. Flood (33–38) . . .
61. Silt (39–44) . . .

WILDLIFE HABITAT DEVELOPMENT/PROTECTION

62. Type (45–46) . . . 63. Primary Species (47–49) . . .
64. Animal Months (50–54) . . .
65. Number Increase (55–59) . . .
66. Pounds Fish Increase (60–64) . . .
67. Rare/Endangered (65) . . .

VISITOR DAYS ADDED 68. Fisherman (66–69) . . .

69. Hunter (70–73) . . . 70. Other (74–77) . . .

IV – PROGRESS REPORT — Card 4

COMPLETION DATA

UNITS 90. Primary (11–16) . . .
91. Secondary (17–21) . . .

TIME 92. Fiscal Year (22–23) . . .
93. Third (24) . . .

94. Contract No. (25–29) . . . CT

CONTRIBUTION DETAIL

95. Agreement (30) . . . 96. Participant (31) . . .
97. Contributor's Name (32–51) . . .

CONTRIBUTIONS

98. Deposited (52–56) . . .

Undeposited

99. Materials (57–61) . . .
100. Labor/Equipment (62–66) . . .

V – DETAIL ESTIMATE OF UNITS AND COSTS

WORK DESCRIPTION AND MATERIALS (a)	UNITS EA. MILE, ETC. (b)	UNITS COST (c)	BLM COSTS MATERIALS (d)	BLM COSTS CONTRACT (e)	COOPERATOR COSTS MATERIALS (f)	COOPERATOR COSTS LABOR (g)
Seed			100			
Equip. rental				100		
Barrier			100	100		
Gate			100	100		
TOTALS Materials						
Labor/Equipment						56

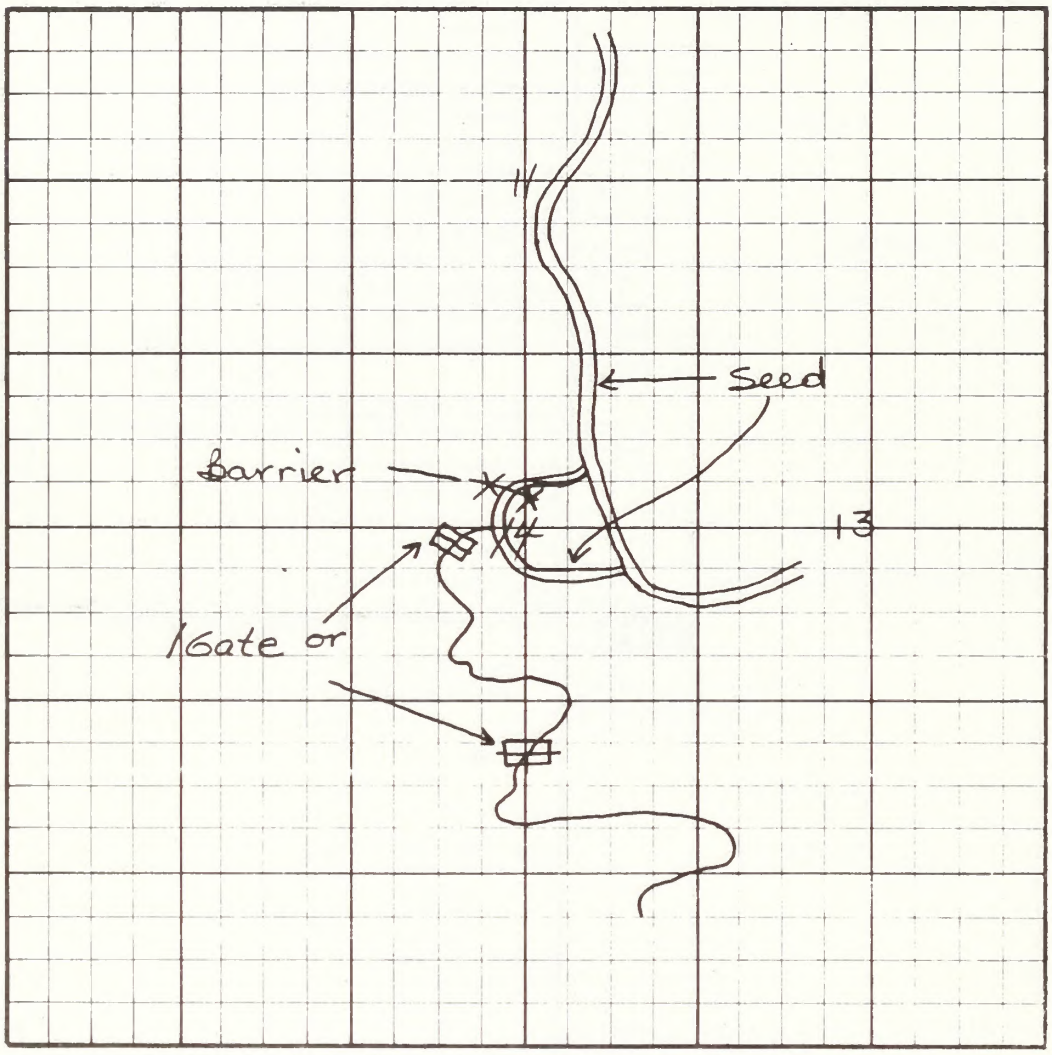
Form 1630–8 (February 1977)

JOB IDENTIFICATION STATE CO DISTRICT 03 JOB NUMBER

VI – LOCATION PLAT

Scale 1 inch = 1/2 mile

T. 35N R. 10W Meridian



VII – NARRATIVE DESCRIPTION OR JUSTIFICATION

Seed 2 miles of jeep trail and install 1 gate (steel w/ posts set in concrete) and install barrier-fence

Prepared by	Title	Date
T. Reed	Wildlife Biol.	8-78
Approved by	Title	Date

57

GPO 829-264

Imp. 6

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

JOB DOCUMENTATION REPORT

JOB IDENTIFICATION
1. State (2–3)
2. District (4–5)
3. Job No. (6–9)
4. Transaction Code (10)

I – GENERAL DESCRIPTION — Card 1

5. Job Name (11–30): Barnroof Spring

LOCATION CODES
6. Special Project Code (31–34)
7. Planning Unit (35–36)
8. Sub-Basin (37–38) 9. County (39–41)
10. Watershed No. (42–44)
11. Allotment No. (45–48)
12. Wildlife Habitat Area (49–51)

SITE AND VEGETATIVE DESCRIPTION
13. Present SSF (52–53) 14. % Slope (54–55)
15. Exposure (56) 16. Soil Texture (57)
17. Precipitation (inches) (58–59)
18. Elevation (feet) (60–64)
19. Vegetative Subtype (65–67)

COMPOSITION (Percent)
20. Grasses (68–69) 21. Forbs (70–71)
22. Browse (72–73)

COVER (Percent)
23. Vegetative (74–75) 24. Litter (76–77)
25. Bare Ground (78–79)

II – ANNUAL WORK PLAN INPUT DATA — Card 2

75. Subactivity (11–14): 4350
76. Work Job Code (15–18): 5857

U[illegible] PLANNED
77. Primary (19–24)
78. Secondary (25–29)

TIME OF AWARD
79. Fiscal Year (30–31) 80. Third (32)

TIME OF COMPLETION
81. Fiscal Year (33–34) 82. Third (35)

BLM COST 83. Method (36)
84. Material (37–41)
85. Contract (42–47)

CONTRIBUTED COST
86. Material (48–52)
87. Labor/Equipment (53–57)

MAINTENANCE
88. Responsibility (58) 89. Cycle (59–61)

III – JOB DETAILS AND BENEFITS — Card 3

37. Primary Job Objective (11)

PLANT AND PEST CONTROL
39. Chemical (12) 42. Method (13)
45. Mechanical – Method (14)

ARTIFICIAL REVEGETATION
47. Pounds Seed/Acre (15–17)
48. Seedlings/Acre (18–21) 49. Method (22)
51. AUM's Livestock Forage Added (23–26)
52. Future SSF (27–28)

WATERSHED TILLAGE 54. Method (29)

FACILITIES 55. Type (30) 56. Other Misc. (31)

WATER DEVELOPMENT CONTROL
59. Structure Type (32)
STORAGE (Ac. Ft.) 60. Flood (33–38)
61. Silt (39–44)

WILDLIFE HABITAT DEVELOPMENT PROTECTION
62. Type (45–46) 63. Primary Species (47–49)
64. Animal Months (50–54)
65. Number Increase (55–59)
66. Pounds Fish Increase (60–64)
67. Rare Endangered (65)

VISITOR DAYS ADDED 68. Fisherman (66–69)
69. Hunter (70–73) 70. Other (74–77)

IV – PROGRESS REPORT — Card 4

COMPLETION DATA
UNITS 90. Primary (11–16)
91. Secondary (17–21)
TIME 92. Fiscal Year (22–23)
93. Third (24)
94. Contract No. (25–29) CT

CONTRIBUTION DETAIL
95. Agreement (30) 96. Participant (31)
97. Contributor's Name (32–51)

CONTRIBUTIONS
98. Deposited (52–56)
Undeposited
99. Materials (57–61)
100. Labor/Equipment (62–66)

V – DETAIL ESTIMATE OF UNITS AND COSTS

WORK DESCRIPTION AND MATERIALS (a)	UNITS: EA MILE, ETC (b)	UNITS: COST (c)	BLM COSTS: MATERIALS (d)	BLM COSTS: CONTRACT (e)	COOPERATOR COSTS: MATERIALS (f)	COOPERATOR COSTS: LABOR (g)
Pipeline		$1/ft.	$2000			
Float Control			$700			
Spring development			$1000			
TOTALS Materials						
Labor/Equipment						58

Form 1050-8 (February 1977)

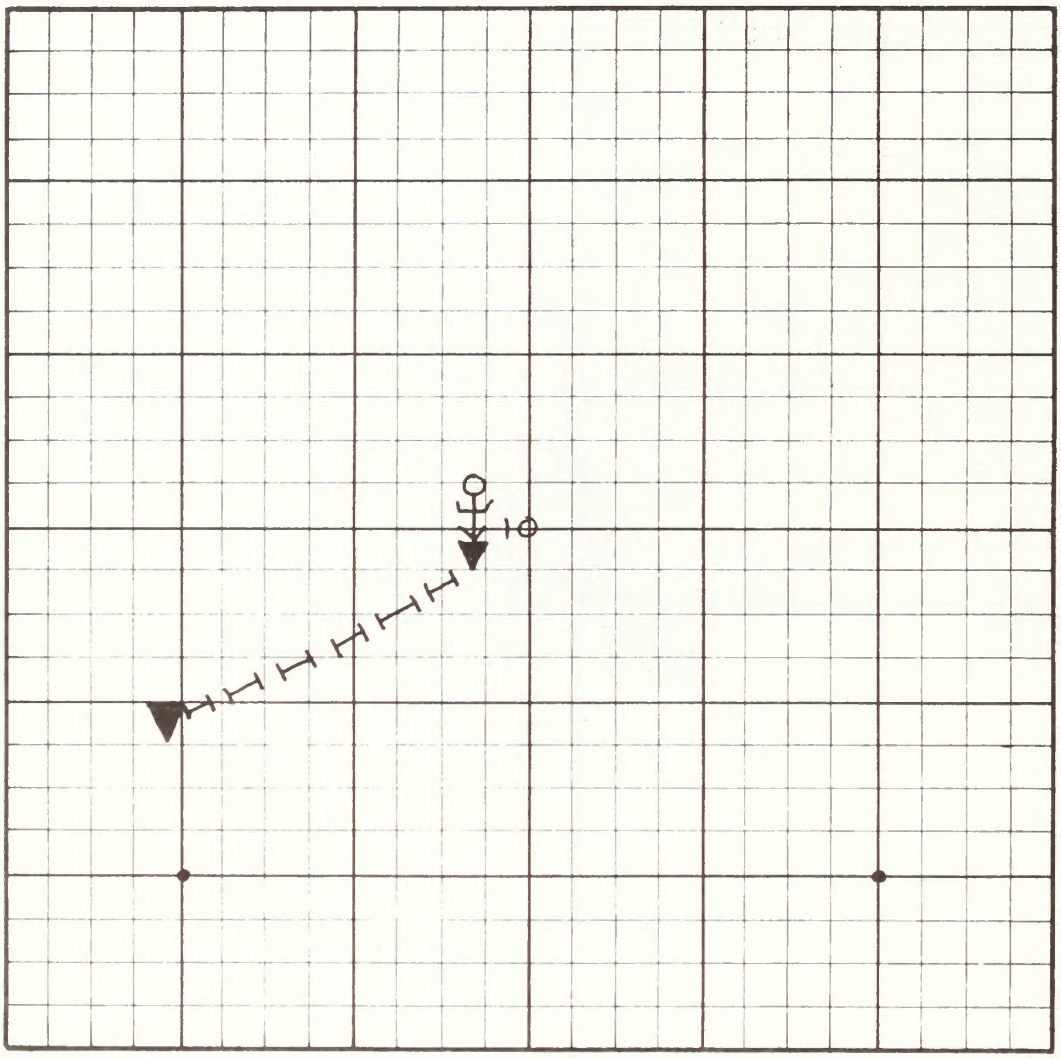
JOB IDENTIFICATION STATE DISTRICT JOB NUMBER

VI – LOCATION PLAT

Scale 1 inch = 1/4 mile

T. 35N R. 10W

Meridian



VII – NARRATIVE DESCRIPTION OR JUSTIFICATION

Develop spring, .4 miles pipeline and 2 gagglers to provide small mammals and birds with water. – No vehicle access? Maybe!

Prepared by	Title	Date
T. Reed	Wild life Biol.	8-78
Approved by	Title	Date

GPO 85

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

JOB DOCUMENTATION REPORT

I – GENERAL DESCRIPTION (Card 1)

5. Job Name (11–30): Perins Shrub Plant

LOCATION CODES

6. Special Project Code (31–34)
7. Planning Unit (35–36)
8. Sub-Basin (37–38)
9. County (39–41)
10. Watershed No. (42–44)
11. Allotment No. (45–48)
12. Wildlife Habitat Area (49–51)

SITE AND VEGETATIVE DESCRIPTION

13. Present SSF (52–53)
14. Slope (54–55)
15. Exposure (56)
16. Soil Texture (57)
17. Precipitation (inches) (58–59)
18. Elevation (feet) (60–64)
19. Vegetative Subtype (65–67)

COMPOSITION (Percent)

20. Grasses (68–69)
21. Forbs (70–71)
22. Browse (72–73)

COVER (Percent)

23. Vegetative (74–75)
24. Litter (76–77)
25. Bare Ground (78–79)

II – ANNUAL WORK PLAN INPUT DATA (Card 2)

75. Subactivity (11–14): 4350
76. Work Job Code (15–18): 5855

U PLANNED

77. Primary (19–24)
78. Secondary (25–29)

TIME OF AWARD

79. Fiscal Year (30–31)
80. Third (32)

TIME OF COMPLETION

81. Fiscal Year (33–34)
82. Third (35)

BLM COST 83. Method (36)

84. Material (37–41)
85. Contract (42–47)

CONTRIBUTED COST

86. Material (48–52)
87. Labor Equipment (53–57)

MAINTENANCE

88. Responsibility (58)
89. Cycle (59–61)

JOB IDENTIFICATION

1. State (2–3)
2. District (4–5)
3. Job No. (6–9)
4. Transaction Code (10)

III – JOB DETAILS AND BENEFITS (Card 3)

37. Primary Job Objective (11)

PLANT AND PEST CONTROL

39. Chemical (12)
42. Method (13)
45. Mechanical – Method (14)

ARTIFICIAL REVEGETATION

47. Pounds Seed/Acre (15–17)
48. Seedlings/Acre (18–21)
49. Method (22)
51. AUM's Livestock Forage Added (23–26)
52. Future SSF (27–28)

WATERSHED TILLAGE 54. Method (29)

FACILITIES 55. Type (30) 56. Other Misc. (31)

WATER DEVELOPMENT/CONTROL

59. Structure Type (32)

STORAGE (Ac. Ft.) 60. Flood (33–38)
61. Silt (39–44)

WILDLIFE HABITAT DEVELOPMENT/PROTECTION

62. Type (45–46)
63. Primary Species (47–49)
64. Animal Months (50–54)
65. Number Increase (55–59)
66. Pounds Fish Increase (60–64)
67. Rare/Endangered (65)

VISITOR DAYS ADDED 68. Fisherman (66–69)

69. Hunter (70–73)
70. Other (74–77)

IV – PROGRESS REPORT (Card 4)

COMPLETION DATA

UNITS 90. Primary (11–16)
91. Secondary (17–21)

TIME 92. Fiscal Year (22–23)
93. Third (24)

94. Contract No. (25–29) CT

CONTRIBUTION DETAIL

95. Agreement (30)
96. Participant (31)
97. Contributor's Name (32–51)

CONTRIBUTIONS

98. Deposited (52–56)

Undeposited

99. Materials (57–61)
100. Labor Equipment (62–66)

V – DETAIL ESTIMATE OF UNITS AND COSTS

WORK DESCRIPTION AND MATERIALS (a)	UNITS EA MILE, ETC (b)	UNITS COST (c)	BLM COSTS MATERIALS (d)	BLM COSTS CONTRACT (e)	COOPERATOR COSTS MATERIALS (f)	COOPERATOR COSTS LABOR (g)
2000 seedlings	ea.	.65	1300			
planting			1050			
TOTALS Materials						
Labor Equipment						60

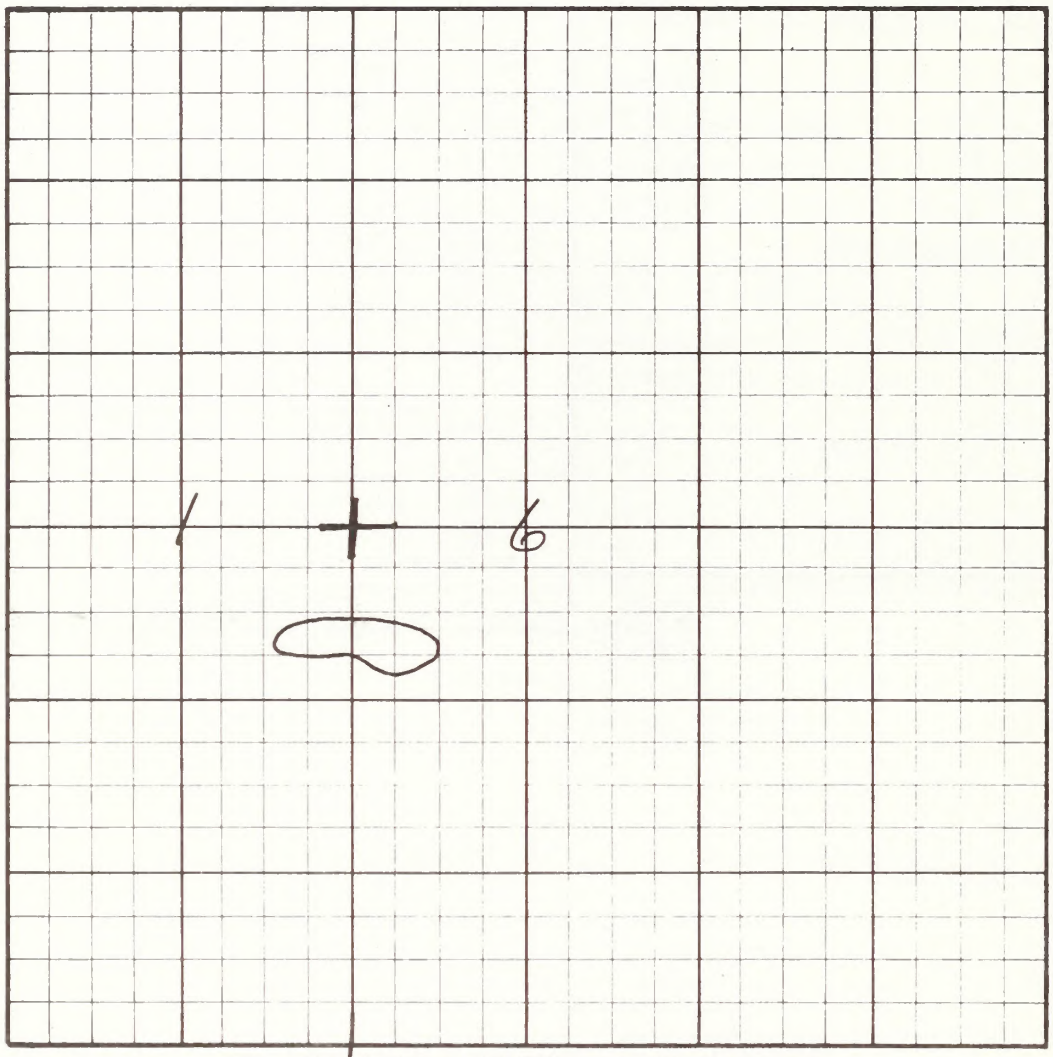
Form 1639-8 (February 1977)

JOB IDENTIFICATION STATE DISTRICT JOB NUMBER

VI – LOCATION PLAT

Scale 1 inch = 1/2 mile

T. 35 N R. 10 W Meridian



VII – NARRATIVE DESCRIPTION OR JUSTIFICATION

10W | 9W

approx. 2000 linear feet of planting approx. 1 seedling/ft. 2000 seedlings of aspen, rose & black choke cherry equal amounts.

Prepared by	Title	Date
T. Reed	Wildlife biol.	8-78
Approved by	Title	Date

GPO 859-264

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

JOB DOCUMENTATION REPORT

I – GENERAL DESCRIPTION (Card 1)

5. Job Name (11–30): Lightner Shrub Plant

LOCATION CODES

6. Special Project Code (31–34)
7. Planning Unit (35–36)
8. Sub-Basin (37–38) 9. County (39–41)
10. Watershed No. (42–44)
11. Allotment No. (45–48)
12. Wildlife Habitat Area (49–51)

SITE AND VEGETATIVE DESCRIPTION

13. Present SSF (52–53) 14. % Slope (54–55)
15. Exposure (56) 16. Soil Texture (57)
17. Precipitation (inches) (58–59)
18. Elevation (feet) (60–64)
19. Vegetative Subtype (65–67)

COMPOSITION (Percent)

20. Grasses (68–69) 21. Forbs (70–71)
22. Browse (72–73)

COVER (Percent)

23. Vegetative (74–75) 24. Litter (76–77)
25. Bare Ground (78–79)

II – ANNUAL WORK PLAN INPUT DATA (Card 2)

75. Subactivity (11–14): 4350
76. Work Job Code (15–18): 5855

U S PLANNED

77. Primary (19–24)
78. Secondary (25–29)

TIME OF AWARD

79. Fiscal Year (30–31) 80. Third (32)

TIME OF COMPLETION

81. Fiscal Year (33–34) 82. Third (35)

BLM COST 83. Method (36)

84. Material (37–41)
85. Contract (42–47)

CONTRIBUTED COST

86. Material (48–52)
87. Labor/Equipment (53–57)

MAINTENANCE

88. Responsibility (58) 89. Cycle (59–61)

JOB IDENTIFICATION

1. State (2–3)
2. District (4–5)
3. Job No. (6–9)
4. Transaction Code (10)

III – JOB DETAILS AND BENEFITS (Card 3)

37. Primary Job Objective (11)

PLANT AND PEST CONTROL

39. Chemical (12) 42. Method (13)
45. Mechanical – Method (14)

ARTIFICIAL REVEGETATION

47. Pounds Seed/Acre (15–17)
48. Seedlings/Acre (18–21) 49. Method (22)
51. AUM's Livestock Forage Added (23–26)
52. Future SSF (27–28)

WATERSHED TILLAGE 54. Method (29)

FACILITIES 55. Type (30) 56. Other Misc. (31)

WATER DEVELOPMENT/CONTROL

59. Structure Type (32)

STORAGE (Ac. Ft.) 60. Flood (33–38)
61. Silt (39–44)

WILDLIFE HABITAT DEVELOPMENT PROTECTION

62. Type (45–46) 63. Primary Species (47–49)
64. Animal Months (50–54)
65. Number Increase (55–59)
66. Pounds Fish Increase (60–64)
67. Rare/Endangered (65)

VISITOR DAYS ADDED 68. Fisherman (66–69)
69. Hunter (70–73) 70. Other (74–77)

IV – PROGRESS REPORT (Card 4)

COMPLETION DATA

UNITS 90. Primary (11–16)
91. Secondary (17–21)

TIME 92. Fiscal Year (22–23)
93. Third (24)

94. Contract No. (25–29) CT

CONTRIBUTION DETAIL

95. Agreement (30) 96. Participant (31)
97. Contributor's Name (32–51)

CONTRIBUTIONS

98. Deposited (52–56)

Undeposited

99. Materials (57–61)
100. Labor/Equipment (62–66)

V – DETAIL ESTIMATE OF UNITS AND COSTS

WORK DESCRIPTION AND MATERIALS (a)	UNITS: EA. MILE, ETC (b)	UNITS: COST (c)	BLM COSTS: MATERIALS (d)	BLM COSTS: CONTRACT (e)	COOPERATOR COSTS: MATERIALS (f)	COOPERATOR COSTS: LABOR (g)
2500 seedlings	ea.	.65	1625			
planting			1300			
TOTALS Materials						
Labor/Equipment						

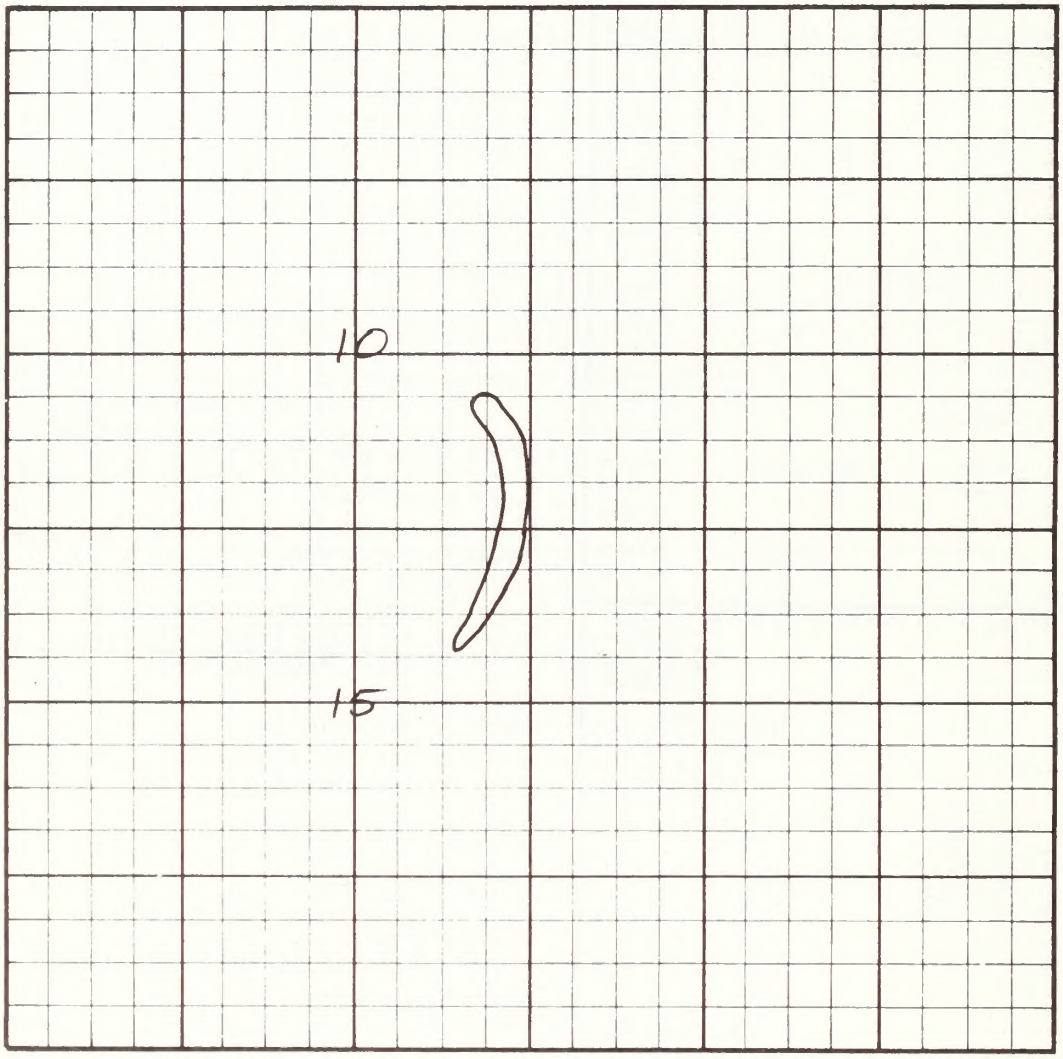
Form 1630–8 (February 1977)

JOB IDENTIFICATION STATE DISTRICT JOB NUMBER

VI – LOCATION PLAT

Scale 1 inch = 1/2 mile

T. 35 N R. 10 W Meridian



VII – NARRATIVE DESCRIPTION OR JUSTIFICATION

Plant seedlings of Russian olive, chokecherry, and bessey cherry 30' x 1 mile along roadside.

olive 500
chokecherry 1000
bessey cherry 1000

Prepared by	Title	Date
T. Reed	Wildlife Biol.	8-78
Approved by	Title	Date

GPO 839-264

Imp. 7,8,9,10

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

JOB DOCUMENTATION REPORT

I – GENERAL DESCRIPTION — Card 1

5. Job Name (11–30): Perins Gabions & Guzzlers

LOCATION CODES

6. Special Project Code (31–34)
7. Planning Unit (35–36)
8. Sub-Basin (37–38) 9. County (39–41)
10. Watershed No. (42–44)
11. Allotment No. (45–48)
12. Wildlife Habitat Area (49–51)

SITE AND VEGETATIVE DESCRIPTION

13. Present SSF (52–53) 14. % Slope (54–55)
15. Exposure (56) 16. Soil Texture (57)
17. Precipitation (inches) (58–59)
18. Elevation (feet) (60–64)
19. Vegetative Subtype (65–67)

COMPOSITION (Percent)

20. Grasses (68–69) 21. Forbs (70–71)
22. Browse (72–73)

COVER (Percent)

23. Vegetative (74–75) 24. Litter (76–77)
25. Bare Ground (78–79)

II – ANNUAL WORK PLAN INPUT DATA — Card 2

75. Subactivity (11–14): 4340
76. Work Job Code (15–18): 5357

U S PLANNED

77. Primary (19–24)
78. Secondary (25–29)

TIME OF AWARD

79. Fiscal Year (30–31) 80. Third (32)

TIME OF COMPLETION

81. Fiscal Year (33–34) 82. Third (35)

BLM COST 83. Method (36)

84. Material (37–41)
85. Contract (42–47)

CONTRIBUTED COST

86. Material (48–52)
87. Labor/Equipment (53–57)

MAINTENANCE

88. Responsibility (58) 89. Cycle (59–61)

JOB IDENTIFICATION

1. State (2–3)
2. District (4–5)
3. Job No. (6–9)
4. Transaction Code (10)

III – JOB DETAILS AND BENEFITS — Card 3

37. Primary Job Objective (11)

PLANT AND PEST CONTROL

39. Chemical (12) 42. Method (13)
45. Mechanical – Method (14)

ARTIFICIAL REVEGETATION

47. Pounds Seed/Acre (15–17)
48. Seedlings/Acre (18–21) 49. Method (22)
51. AUM's Livestock Forage Added (23–26)
52. Future SSF (27–28)

WATERSHED TILLAGE 54. Method (29)

FACILITIES 55. Type (30) 56. Other Misc. (31)

WATER DEVELOPMENT/CONTROL

59. Structure Type (32)

STORAGE (Ac. Ft.) 60. Flood (33–38)
61. Silt (39–44)

WILDLIFE HABITAT DEVELOPMENT/PROTECTION

62. Type (45–46) 63. Primary Species (47–49)
64. Animal Months (50–54)
65. Number Increase (55–59)
66. Pounds Fish Increase (60–64)
67. Rare/Endangered (65)

VISITOR DAYS ADDED 68. Fisherman (66–69)
69. Hunter (70–73) 70. Other (74–77)

IV – PROGRESS REPORT — Card 4

COMPLETION DATA

UNITS 90. Primary (11–16)
91. Secondary (17–21)
TIME 92. Fiscal Year (22–23)
93. Third (24)
94. Contract No. (25–29) CT

CONTRIBUTION DETAIL

95. Agreement (30) 96. Participant (31)
97. Contributor's Name (32–51)

CONTRIBUTIONS

98. Deposited (52–56)

Undeposited

99. Materials (57–61)
100. Labor/Equipment (62–66)

V – DETAIL ESTIMATE OF UNITS AND COSTS

WORK DESCRIPTION AND MATERIALS (a)	UNITS: EA. MILE, ETC (b)	UNITS: COST (c)	BLM COSTS: MATERIALS (d)	BLM COSTS: CONTRACT (e)	COOPERATOR COSTS: MATERIALS (f)	COOPERATOR COSTS: LABOR (g)
7 Gabions	Ea.	1200	8400			
6 pipe & Gagglers & tank	Ea.	500	3000			
TOTALS Materials						
Labor/Equipment						64

Form 1630–8 (February 1977)

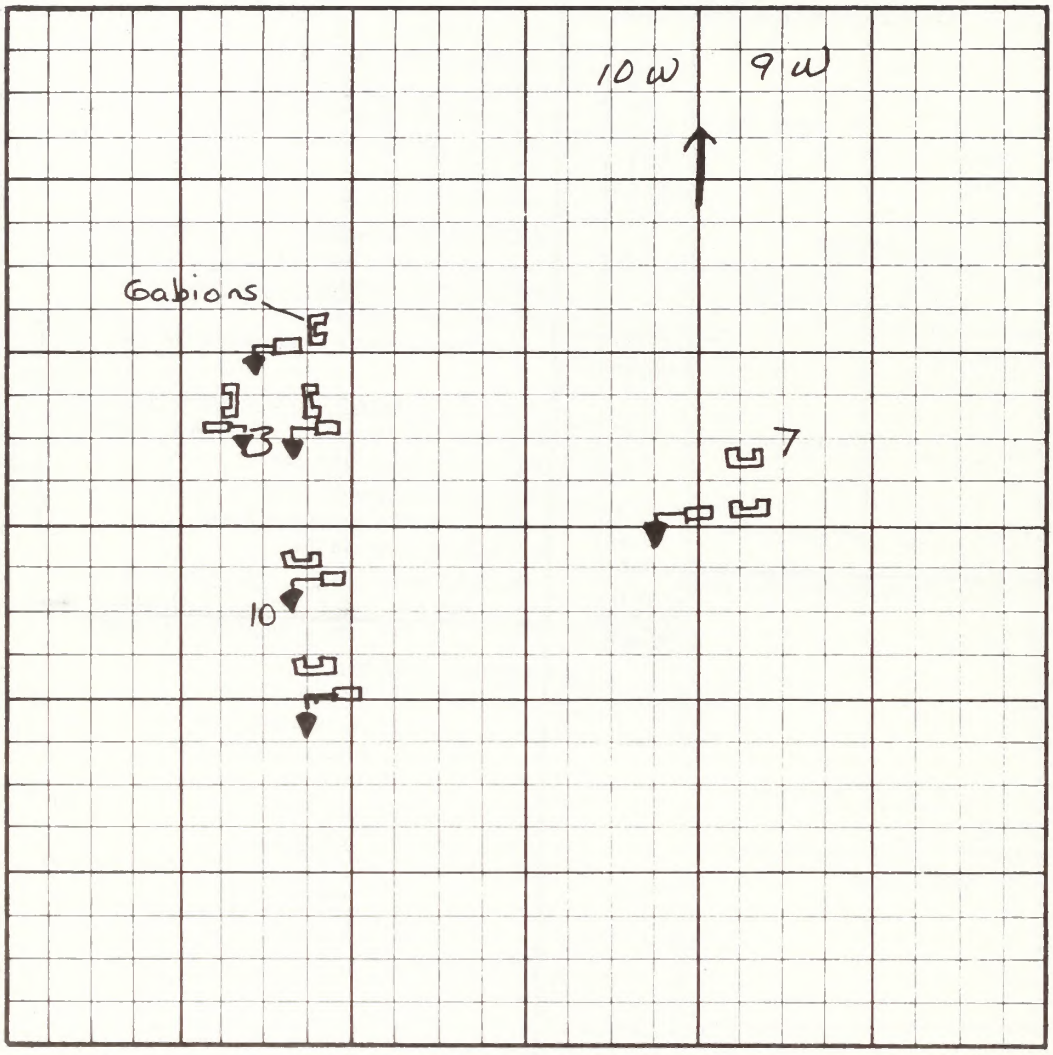
JOB IDENTIFICATION STATE DISTRICT JOB NUMBER

VI – LOCATION PLAT

T. 35N R. 10W 9W

Scale 1 inch =

Meridian



VII – NARRATIVE DESCRIPTION OR JUSTIFICATION

Construct 7 rock gabions (or similar device) to control gully erosion on Dry Gulch and Dry Fork of Lightner Cr. Nominal size of 15'WX 6'HX 3'D. Construct 6 water holding tanks & gagglers w/ pipe to gabions

Prepared by	Title	Date
T. Reed	Wildlife Biol.	8-78
Approved by	Title	Date

GPO 633-264

Imp.11

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

JOB DOCUMENTATION REPORT

I – GENERAL DESCRIPTION — Card 1

5. Job Name (11–30): Animals Fence

LOCATION CODES

6. Special Project Code (31–34)
7. Planning Unit (35–36)
8. Sub-Basin (37–38) 9. County (39–41)
10. Watershed No. (42–44)
11. Allotment No. (45–48)
12. Wildlife Habitat Area (49–51)

SITE AND VEGETATIVE DESCRIPTION

13. Present SSF (52–53) 14. % Slope (54–55)
15. Exposure (56) 16. Soil Texture (57)
17. Precipitation (inches) (58–59)
18. Elevation (feet) (60–64)
19. Vegetative Subtype (65–67)

COMPOSITION *(Percent)*

20. Grasses (68–69) 21. Forbs (70–71)
22. Browse (72–73)

COVER *(Percent)*

23. Vegetative (74–75) 24. Litter (76–77)
25. Bare Ground (78–79)

II – ANNUAL WORK PLAN INPUT DATA — Card 2

75. Subactivity (11–14): 4350
76. Work Job Code (15–18): 5560

UNITS PLANNED

77. Primary (19–24): 1.5
78. Secondary (25–29)

TIME OF AWARD

79. Fiscal Year (30–31) 80. Third (32)

TIME OF COMPLETION

81. Fiscal Year (33–34) 82. Third (35)

BLM COST 83. Method (36)

84. Material (37–41)
85. Contract (42–47)

CONTRIBUTED COST

86. Material (48–52)
87. Labor/Equipment (53–57)

MAINTENANCE

88. Responsibility (58) 89. Cycle (59–61)

JOB IDENTIFICATION

1. State (2–3)
2. District (4–5)
3. Job No. (6–9)
4. Transaction Code (10)

III – JOB DETAILS AND BENEFITS — Card 3

37. Primary Job Objective (11)

PLANT AND PEST CONTROL

39. Chemical (12) 42. Method (13)
45. Mechanical – Method (14)

ARTIFICIAL REVEGETATION

47. Pounds Seed/Acre (15–17)
48. Seedlings/Acre (18–21) 49. Method (22)
51. AUM's Livestock Forage Added (23–26)
52. Future SSF (27–28)

WATERSHED TILLAGE 54. Method (29)

FACILITIES 55. Type (30) 56. Other Misc. (31)

WATER DEVELOPMENT/CONTROL

59. Structure Type (32)

STORAGE (Ac. Ft.) 60. Flood (33–38)
61. Silt (39–44)

WILDLIFE HABITAT DEVELOPMENT/PROTECTION

62. Type (45–46) 63. Primary Species (47–49)
64. Animal Months (50–54)
65. Number Increase (55–59)
66. Pounds Fish Increase (60–64)
67. Rare/Endangered (65)

VISITOR DAYS ADDED 68. Fisherman (66–69)

69. Hunter (70–73) 70. Other (74–77)

IV – PROGRESS REPORT — Card 4

COMPLETION DATA

UNITS 90. Primary (11–16)
91. Secondary (17–21)

TIME 92. Fiscal Year (22–23)
93. Third (24)

94. Contract No. (25–29) CT

CONTRIBUTION DETAIL

95. Agreement (30) 96. Participant (31)
97. Contributor's Name (32–51)

CONTRIBUTIONS

98. Deposited (52–56)

Undeposited

99. Materials (57–61)
100. Labor/Equipment (62–66)

V – DETAIL ESTIMATE OF UNITS AND COSTS

WORK DESCRIPTION AND MATERIALS (a)	UNITS EA MILE, ETC (b)	UNITS COST (c)	BLM COSTS MATERIALS (d)	BLM COSTS CONTRACT (e)	COOPERATOR COSTS MATERIALS (f)	COOPERATOR COSTS LABOR (g)
8' Big Game Fence Material install	1.5mi		10,000			
2 woven wire w/ 2 strands of Bar				10,000		
TOTALS Materials						
Labor/Equipment						

66

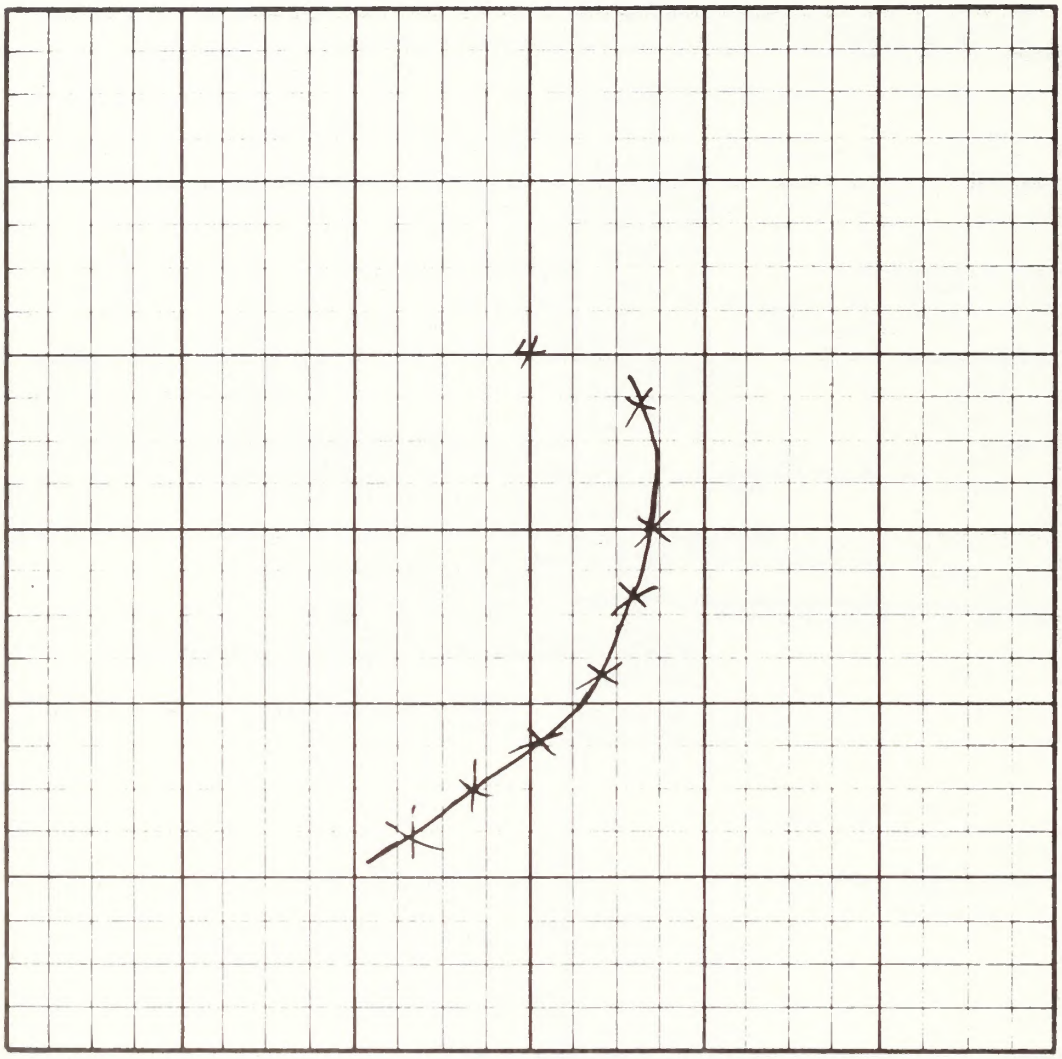
Form 1630-8 (February 1977)

JOB IDENTIFICATION STATE C O DISTRICT 0 3 JOB NUMBER

VI – LOCATION PLAT

Scale 1 inch = 1/2 mile

T 35N R 9 W Meridian



VII – NARRATIVE DESCRIPTION OR JUSTIFICATION

8' Big game fence to keep deer and elk off of the highway.

Prepared by	Title	Date
T. Reed	Wildlife Biol.	8-78
Approved by	Title	

Imp. 1

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

JOB DOCUMENTATION REPORT

JOB IDENTIFICATION
1. State (2–3)
2. District (4–5)
3. Job No. (6–9)
4. Transaction Code (10)

I – GENERAL DESCRIPTION — Card 1

5. Job Name (11–30): Animals Catchment

LOCATION CODES
6. Special Project Code (31–34)
7. Planning Unit (35–36)
8. Sub-Basin (37–38) 9. County (39–41)
10. Watershed No. (42–44)
11. Allotment No. (45–48)
12. Wildlife Habitat Area (49–51)

SITE AND VEGETATIVE DESCRIPTION
13. Present SSF (52–53) 14. % Slope (54–55)
15. Exposure (56) 16. Soil Texture (57)
17. Precipitation (inches) (58–59)
18. Elevation (feet) (60–64)
19. Vegetative Subtype (65–67)

COMPOSITION (Percent)
20. Grasses (68–69) 21. Forbs (70–71)
22. Browse (72–73)

COVER (Percent)
23. Vegetative (74–75) 24. Litter (76–77)
25. Bare Ground (78–79)

II – ANNUAL WORK PLAN INPUT DATA — Card 2

75. Subactivity (11–14): 4350
76. Work Job Code (15–18): 5557

U S PLANNED
77. Primary (19–24): 1.
78. Secondary (25–29)

TIME OF AWARD
79. Fiscal Year (30–31) 80. Third (32)

TIME OF COMPLETION
81. Fiscal Year (33–34) 82. Third (35)

BLM COST 83. Method (36)
84. Material (37–41)
85. Contract (42–47)

CONTRIBUTED COST
86. Material (48–52)
87. Labor/Equipment (53–57)

MAINTENANCE
88. Responsibility (58) 89. Cycle (59–61)

III – JOB DETAILS AND BENEFITS — Card 3

37. Primary Job Objective (11)

PLANT AND PEST CONTROL
39. Chemical (12) 42. Method (13)
45. Mechanical – Method (14)

ARTIFICIAL REVEGETATION
47. Pounds Seed/Acre (15–17)
48. Seedlings/Acre (18–21) 49. Method (22)
51. AUM's Livestock Forage Added (23–26)
52. Future SSF (27–28)

WATERSHED TILLAGE 54. Method (29)

FACILITIES 55. Type (30) 56. Other Misc. (31)

WATER DEVELOPMENT/CONTROL
59. Structure Type (32)
STORAGE (Ac. Ft.) 60. Flood (33–38)
61. Silt (39–44)

WILDLIFE HABITAT DEVELOPMENT/PROTECTION
62. Type (45–46) 63. Primary Species (47–49)
64. Animal Months (50–54)
65. Number Increase (55–59)
66. Pounds Fish Increase (60–64)
67. Rare/Endangered (65)

VISITOR DAYS ADDED 68. Fisherman (66–69)
69. Hunter (70–73) 70. Other (74–77)

IV – PROGRESS REPORT — Card 4

COMPLETION DATA
UNITS 90. Primary (11–16)
91. Secondary (17–21)
TIME 92. Fiscal Year (22–23)
93. Third (24)
94. Contract No. (25–29) CT

CONTRIBUTION DETAIL
95. Agreement (30) 96. Participant (31)
97. Contributor's Name (32–51)

CONTRIBUTIONS
98. Deposited (52–56)
Undeposited
99. Materials (57–61)
100. Labor/Equipment (62–66)

V – DETAIL ESTIMATE OF UNITS AND COSTS

WORK DESCRIPTION AND MATERIALS (a)	UNITS: EA MILE, ETC (b)	UNITS: COST (c)	BLM COSTS: MATERIALS (d)	BLM COSTS: CONTRACT (e)	COOPERATOR COSTS: MATERIALS (f)	COOPERATOR COSTS: LABOR (g)
Apron – tank – & fence			4000			
TOTALS Materials						
Labor/Equipment						68

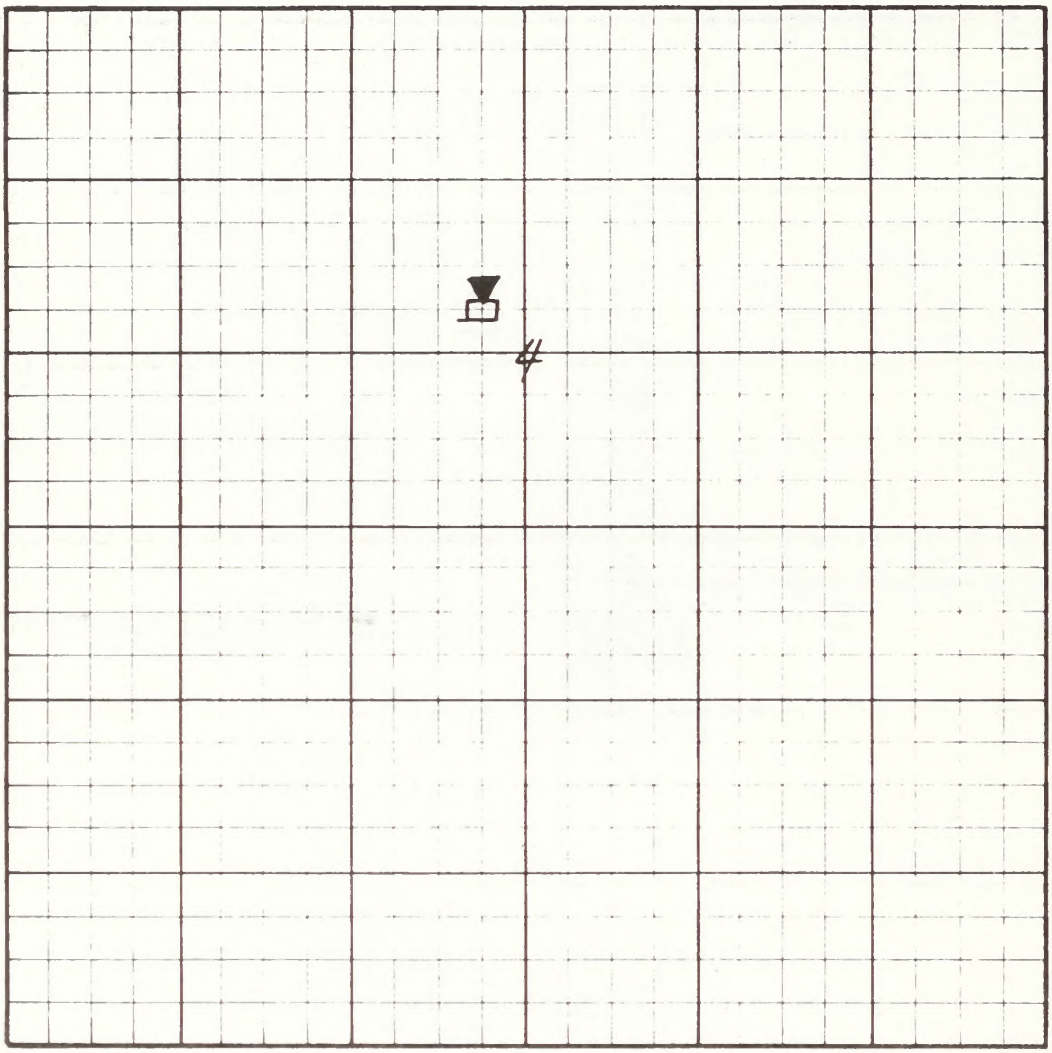
Form 1630–8 (February 1977)

JOB IDENTIFICATION STATE C O DISTRICT 0 3 JOB NUMBER

VI LOCATION PLAT

Scale 1 inch ½ mile

T. 35 N R. 9 W Meridian



VII – NARRATIVE DESCRIPTION OR JUSTIFICATION

catchment to provide water for big game, upland game, and non game species

Prepared by	Title	Date
T. Reed	Wildlife Biol.	8-78
Approved by	Title	Date

GPO 839-264

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

JOB DOCUMENTATION REPORT

JOB IDENTIFICATION
1. State (2–3)
2. District (4–5)
3. Job No. (6–9)
4. Transaction Code (10)

I – GENERAL DESCRIPTION — Card 1

5. Job Name (11–30): Animas Brush treat.

LOCATION CODES
6. Special Project Code (31–34)
7. Planning Unit (35–36)
8. Sub-Basin (37–38) 9. County (39–41)
10. Watershed No. (42–44)
11. Allotment No. (45–48)
12. Wildlife Habitat Area (49–51)

SITE AND VEGETATIVE DESCRIPTION
13. Present SSF (52–53) 14. % Slope (54–55)
15. Exposure (56) 16. Soil Texture (57)
17. Precipitation (inches) (58–59)
18. Elevation (feet) (60–64)
19. Vegetative Subtype (65–67)

COMPOSITION *(Percent)*
20. Grasses (68–69) 21. Forbs (70–71)
22. Browse (72–73)

COVER *(Percent)*
23. Vegetative (74–75) 24. Litter (76–77)
25. Bare Ground (78–79)

II – ANNUAL WORK PLAN INPUT DATA — Card 2

75. Subactivity (11–14): 4350
76. Work Job Code (15–18): 5555

U 3 PLANNED
77. Primary (19–24): 100.
78. Secondary (25–29)

TIME OF AWARD
79. Fiscal Year (30–31) 80. Third (32)

TIME OF COMPLETION
81. Fiscal Year (33–34) 82. Third (35)

BLM COST 83. Method (36)
84. Material (37–41)
85. Contract (42–47)

CONTRIBUTED COST
86. Material (48–52)
87. Labor/Equipment (53–57)

MAINTENANCE
88. Responsibility (58) 89. Cycle (59–61)

III – JOB DETAILS AND BENEFITS — Card 3

37. Primary Job Objective (11)

PLANT AND PEST CONTROL
39. Chemical (12) 42. Method (13)
45. Mechanical – Method (14)

ARTIFICIAL REVEGETATION
47. Pounds Seed/Acre (15–17)
48. Seedlings/Acre (18–21) 49. Method (22)
51. AUM's Livestock Forage Added (23–26)
52. Future SSF (27–28)

WATERSHED TILLAGE 54. Method (29)

FACILITIES 55. Type (30) 56. Other Misc. (31)

WATER DEVELOPMENT/CONTROL
59. Structure Type (32)
STORAGE (Ac. Ft.) 60. Flood (33–38)
61. Silt (39–44)

WILDLIFE HABITAT DEVELOPMENT/PROTECTION
62. Type (45–46) 63. Primary Species (47–49)
64. Animal Months (50–54)
65. Number Increase (55–59)
66. Pounds Fish Increase (60–64)
67. Rare/Endangered (65)

VISITOR DAYS ADDED 68. Fisherman (66–69)
69. Hunter (70–73) 70. Other (74–77)

IV – PROGRESS REPORT — Card 4

COMPLETION DATA
UNITS 90. Primary (11–16)
91. Secondary (17–21)
TIME 92. Fiscal Year (22–23)
93. Third (24)
94. Contract No. (25–29) CT

CONTRIBUTION DETAIL
95. Agreement (30) 96. Participant (31)
97. Contributor's Name (32–51)

CONTRIBUTIONS
98. Deposited (52–56)
Undeposited
99. Materials (57–61)
100. Labor/Equipment (62–66)

V – DETAIL ESTIMATE OF UNITS AND COSTS

WORK DESCRIPTION AND MATERIALS (a)	UNITS: EA. MILE, ETC. (b)	UNITS: COST (c)	BLM COSTS: MATERIALS (d)	BLM COSTS: CONTRACT (e)	COOPERATOR COSTS: MATERIALS (f)	COOPERATOR COSTS: LABOR (g)
Equip. rental or contract				$2400		
TOTALS Materials						
Labor/Equipment						70

Form 1630–8 (February 1977)

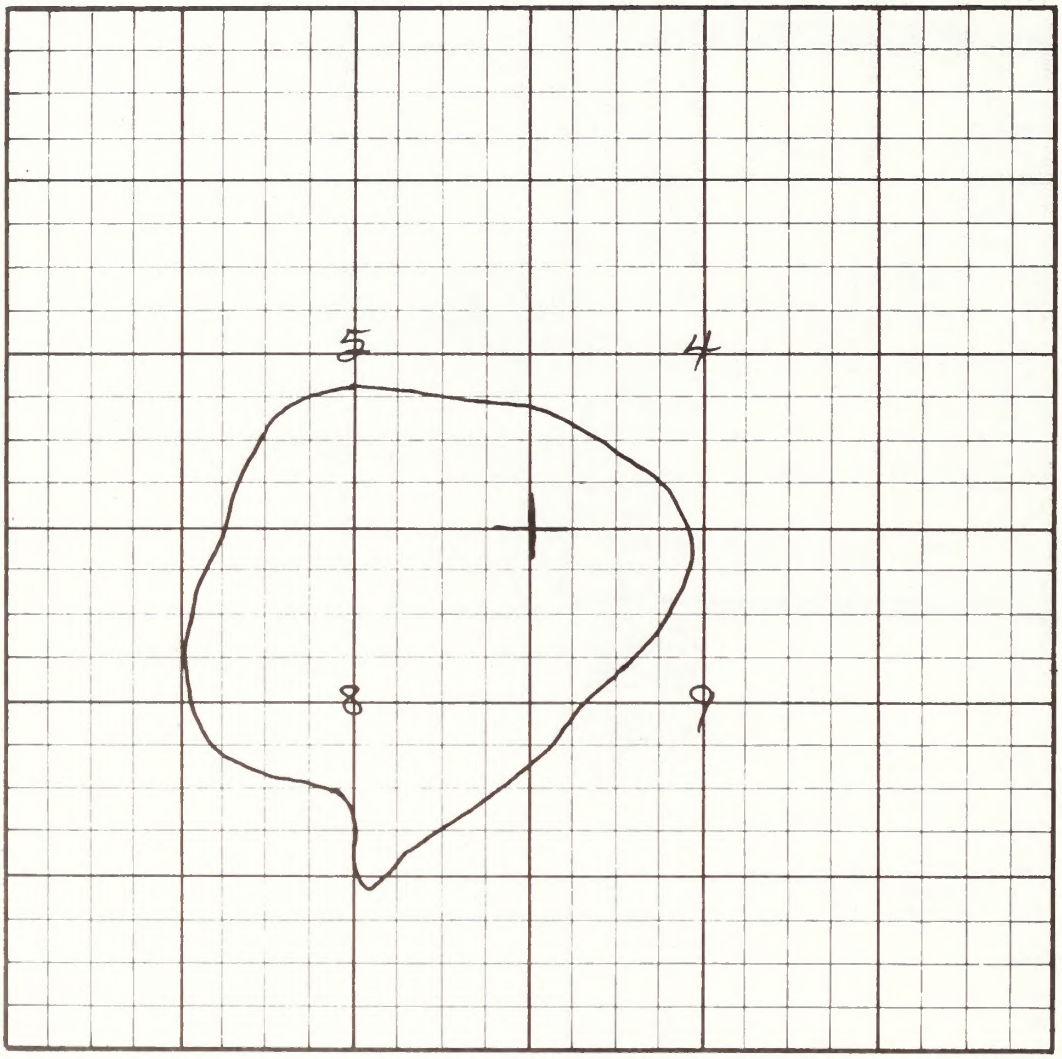
JOB IDENTIFICATION STATE DISTRICT JOB NUMBER

VI – LOCATION PLAT

T. 35N R. 9W

Scale 1 inch = 1/2 mile

Meridian



VII – NARRATIVE DESCRIPTION OR JUSTIFICATION

Treat 100 acres of oakbrush within the above area with brush beater in small scattered patches to increase browse availability and palatability.

Prepared by	Title	Date
T. Reed	Wildlife Biol.	8-78
Approved by	Title	Date

GPO 839-264

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

YCC

JOB DOCUMENTATION REPORT

I – GENERAL DESCRIPTION — Card 1

5. Job Name (11–30): Plains Seed & Eros. Con.

LOCATION CODES

6. Special Project Code (31–34)
7. Planning Unit (35–36)
8. Sub-Basin (37–38) 9. County (39–41)
10. Watershed No. (42–44)
11. Allotment No. (45–48)
12. Wildlife Habitat Area (49–51)

SITE AND VEGETATIVE DESCRIPTION

13. Present SSF (52–53) 14. % Slope (54–55)
15. Exposure (56) 16. Soil Texture (57)
17. Precipitation (inches) (58–59)
18. Elevation (feet) (60–64)
19. Vegetative Subtype (65–67)

COMPOSITION (Percent)

20. Grasses (68–69) 21. Forbs (70–71)
22. Browse (72–73)

COVER (Percent)

23. Vegetative (74–75) 24. Litter (76–77)
25. Bare Ground (78–79)

II – ANNUAL WORK PLAN INPUT DATA — Card 2

75. Subactivity (11–14): 4350
76. Work Job Code (15–18): 5555

U S PLANNED

77. Primary (19–24)
78. Secondary (25–29)

TIME OF AWARD

79. Fiscal Year (30–31) 80. Third (32)

TIME OF COMPLETION

81. Fiscal Year (33–34) 82. Third (35)

BLM COST 83. Method (36)

84. Material (37–41)
85. Contract (42–47)

CONTRIBUTED COST

86. Material (48–52)
87. Labor/Equipment (53–57)

MAINTENANCE

88. Responsibility (58) 89. Cycle (59–61)

JOB IDENTIFICATION

1. State (2–3)
2. District (4–5)
3. Job No. (6–9)
4. Transaction Code (10)

III – JOB DETAILS AND BENEFITS — Card 3

37. Primary Job Objective (11)

PLANT AND PEST CONTROL

39. Chemical (12) 42. Method (13)
45. Mechanical – Method (14)

ARTIFICIAL REVEGETATION

47. Pounds Seed/Acre (15–17)
48. Seedlings/Acre (18–21) 49. Method (22)
51. AUM's Livestock Forage Added (23–26)
52. Future SSF (27–28)

WATERSHED TILLAGE 54. Method (29)

FACILITIES 55. Type (30) 56. Other Misc. (31)

WATER DEVELOPMENT/CONTROL

59. Structure Type (32)

STORAGE (Ac. Ft.) 60. Flood (33–38)
61. Silt (39–44)

WILDLIFE HABITAT DEVELOPMENT/PROTECTION

62. Type (45–46) 63. Primary Species (47–49)
64. Animal Months (50–54)
65. Number Increase (55–59)
66. Pounds Fish Increase (60–64)
67. Rare/Endangered (65)

VISITOR DAYS ADDED 68. Fisherman (66–69)

69. Hunter (70–73) 70. Other (74–77)

IV – PROGRESS REPORT — Card 4

COMPLETION DATA

UNITS 90. Primary (11–16)
91. Secondary (17–21)

TIME 92. Fiscal Year (22–23)
93. Third (24)

94. Contract No. (25–29) CT

CONTRIBUTION DETAIL

95. Agreement (30) 96. Participant (31)
97. Contributor's Name (32–51)

CONTRIBUTIONS

98. Deposited (52–56)

Undeposited

99. Materials (57–61)
100. Labor/Equipment (62–66)

V – DETAIL ESTIMATE OF UNITS AND COSTS

WORK DESCRIPTION AND MATERIALS (a)	UNITS		BLM COSTS		COOPERATOR COSTS	
	EA. MILE, ETC (b)	COST (c)	MATERIALS (d)	CONTRACT (e)	MATERIALS (f)	LABOR (g)
Seed & Mulch			$500	$200	or YCC	
TOTALS Materials						
Labor/Equipment						

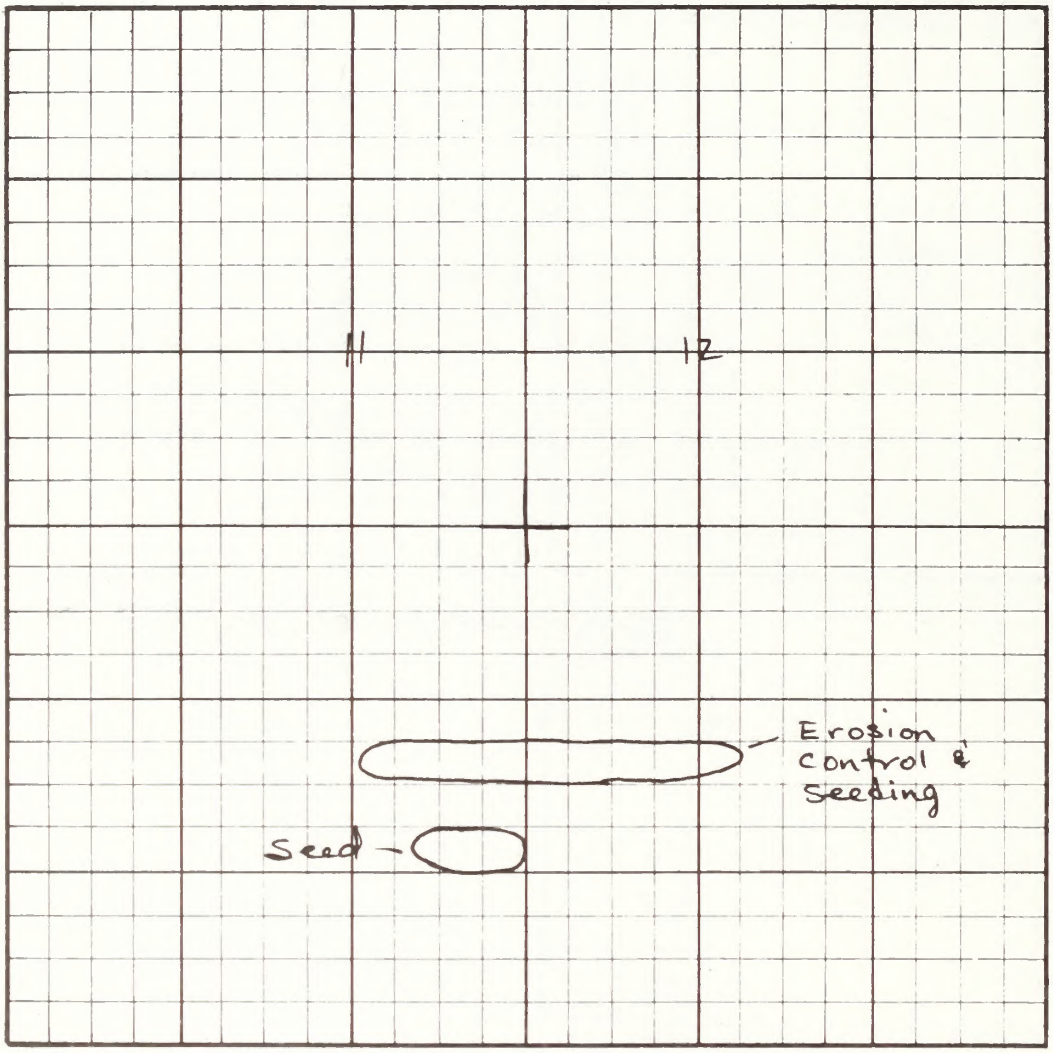
Form 1630-8 (February 1977)

JOB IDENTIFICATION STATE DISTRICT JOB NUMBER

VI – LOCATION PLAT

Scale 1 inch = 1/2 mile

T. 35N R. 10W Meridian



VII – NARRATIVE DESCRIPTION OR JUSTIFICATION

Construct erosion control structures on "game" tracts & seed tracts (< 10 acres) seed meadow (grass-forb) 10 acres.

Prepared by	Title	Date
T. Reed	Wildlife Biol.	8-78
Approved by	Title	Date

GPO 559-264

Imp. 2

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

JOB DOCUMENTATION REPORT

JOB IDENTIFICATION
1. State (2–3) . . . CO
2. District (4–5) . . . 03
3. Job No. (6–9) . . .
4. Transaction Code (10) . . .

I – GENERAL DESCRIPTION — Card 1

5. Job Name (11–30)
Perins Fence

LOCATION CODES
6. Special Project Code (31–34) . . .
7. Planning Unit (35–36) . . .
8. Sub-Basin (37–38) . . . 9. County (39–41) . . .
10. Watershed No. (42–44) . . .
11. Allotment No. (45–48) . . .
12. Wildlife Habitat Area (49–51) . . .

SITE AND VEGETATIVE DESCRIPTION
13. Present SSF (52–53) . . . 14. % Slope (54–55) . . .
15. Exposure (56) . . . 16. Soil Texture (57) . . .
17. Precipitation (inches) (58–59) . . .
18. Elevation (feet) (60–64) . . .
19. Vegetative Subtype (65–67) . . .

COMPOSITION *(Percent)*
20. Grasses (68–69) . . . 21. Forbs (70–71) . . .
22. Browse (72–73) . . .

COVER *(Percent)*
23. Vegetative (74–75) . . . 24. Litter (76–77) . . .
25. Bare Ground (78–79) . . .

II – ANNUAL WORK PLAN INPUT DATA — Card 2

75. Subactivity (11–14) . . . 4350
76. Work Job Code (15–18) . . . 5860

U 3 PLANNED
77. Primary (19–24) . . .
78. Secondary (25–29) . . .

TIME OF AWARD
79. Fiscal Year (30–31) . . . 80. Third (32) . . .

TIME OF COMPLETION
81. Fiscal Year (33–34) . . . 82. Third (35) . . .

BLM COST 83. Method (36) . . .
84. Material (37–41) . . .
85. Contract (42–47) . . .

CONTRIBUTED COST
86. Material (48–52) . . .
87. Labor/Equipment (53–57) . . .

MAINTENANCE
88. Responsibility (58) . . . 89. Cycle (59–61) . . .

III – JOB DETAILS AND BENEFITS — Card 3

37. Primary Job Objective (11) . . .

PLANT AND PEST CONTROL
39. Chemical (12) . . . 42. Method (13) . . .
45. Mechanical – Method (14) . . .

ARTIFICIAL REVEGETATION
47. Pounds Seed Acre (15–17) . . .
48. Seedlings Acre (18–21) . . . 49. Method (22) . . .
51. AUM's Livestock Forage Added (23–26) . . .
52. Future SSF (27–28) . . .

WATERSHED TILLAGE 54. Method (29) . . .

FACILITIES 55. Type (30) . . . 56. Other Misc. (31) . . .

WATER DEVELOPMENT, CONTROL
59. Structure Type (32) . . .
STORAGE (Ac. Ft.) 60. Flood (33–38) . . .
61. Silt (39–44) . . .

WILDLIFE HABITAT DEVELOPMENT PROTECTION
62. Type (45–46) . . . 63. Primary Species (47–49) . . .
64. Animal Months (50–54) . . .
65. Number Increase (55–59) . . .
66. Pounds Fish Increase (60–64) . . .
67. Rare/Endangered (65) . . .

VISITOR DAYS ADDED 68. Fisherman (66–69) . . .
69. Hunter (70–73) . . . 70. Other (74–77) . . .

IV – PROGRESS REPORT — Card 4

COMPLETION DATA
UNITS 90. Primary (11–16) . . .
91. Secondary (17–21) . . .
TIME 92. Fiscal Year (22–23) . . .
93. Third (24) . . .
94. Contract No. (25–29) . . . CT . . .

CONTRIBUTION DETAIL
95. Agreement (30) . . . 96. Participant (31) . . .
97. Contributor's Name (32–51) . . .

CONTRIBUTIONS
98. Deposited (52–56) . . .
Undeposited
99. Materials (57–61) . . .
100. Labor Equipment (62–66) . . .

V – DETAIL ESTIMATE OF UNITS AND COSTS

WORK DESCRIPTION AND MATERIALS (a)	UNITS EA. MILE, ETC (b)	UNITS COST (c)	BLM COSTS MATERIALS (d)	BLM COSTS CONTRACT (e)	COOPERATOR COSTS MATERIALS (f)	COOPERATOR COSTS LABOR (g)
3 Wire Fence	1.75					
Material			1300			
Construct	560 rd	6.50/rd		3700		
TOTALS Materials						
Labor, Equipment						74

Form 1630–8 (February 1977)

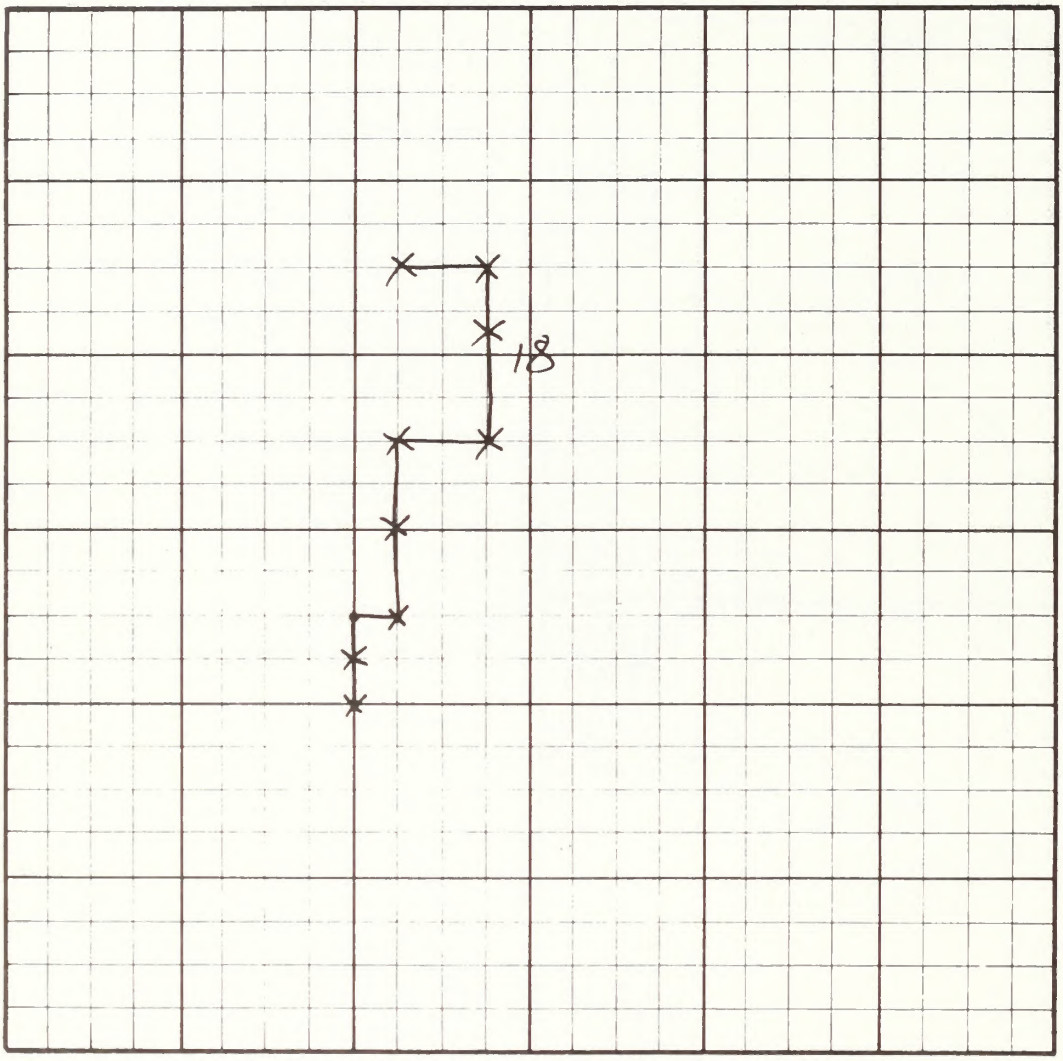
JOB IDENTIFICATION STATE C O DISTRICT 0 3 JOB NUMBER

VI – LOCATION PLAT

T. 35N R. 9W

Scale 1 inch =

Meridian



VII – NARRATIVE DESCRIPTION OR JUSTIFICATION

1 3/4 mile of boundary fence to prevent human disturbance to nesting raptors and wintering big game.

Prepared by	Title	Date
T. Reed	Wildlife Biol.	8-78
Approved by	Title	Date
		75

GPO 839-264

Imp. 4

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

JOB DOCUMENTATION REPORT

I – GENERAL DESCRIPTION — Card 1

5. Job Name (11–30): Animas Rd Stabil.

LOCATION CODES

6. Special Project Code (31–34)
7. Planning Unit (35–36)
8. Sub-Basin (37–38) 9. County (39–41)
10. Watershed No. (42–44)
11. Allotment No. (45–48)
12. Wildlife Habitat Area (49–51)

SITE AND VEGETATIVE DESCRIPTION

13. Present SSF (52–53) 14. % Slope (54–55)
15. Exposure (56) 16. Soil Texture (57)
17. Precipitation (inches) (58–59)
18. Elevation (feet) (60–64)
19. Vegetative Subtype (65–67)

COMPOSITION (Percent)

20. Grasses (68–69) 21. Forbs (70–71)
22. Browse (72–73)

COVER (Percent)

23. Vegetative (74–75) 24. Litter (76–77)
25. Bare Ground (78–79)

II – ANNUAL WORK PLAN INPUT DATA — Card 2

75. Subactivity (11–14): 4350
76. Work Job Code (15–18): 5555

U PLANNED

77. Primary (19–24)
78. Secondary (25–29)

TIME OF AWARD

79. Fiscal Year (30–31) 80. Third (32)

TIME OF COMPLETION

81. Fiscal Year (33–34) 82. Third (35)

BLM COST 83. Method (36)

84. Material (37–41)
85. Contract (42–47)

CONTRIBUTED COST

86. Material (48–52)
87. Labor/Equipment (53–57)

MAINTENANCE

88. Responsibility (58) 89. Cycle (59–61)

JOB IDENTIFICATION

1. State (2–3)
2. District (4–5)
3. Job No. (6–9)
4. Transaction Code (10)

III – JOB DETAILS AND BENEFITS — Card 3

37. Primary Job Objective (11)

PLANT AND PEST CONTROL

39. Chemical (12) 42. Method (13)
45. Mechanical – Method (14)

ARTIFICIAL REVEGETATION

47. Pounds Seed/Acre (15–17)
48. Seedlings/Acre (18–21) 49. Method (22)
51. AUM's Livestock Forage Added (23–26)
52. Future SSF (27–28)

WATERSHED TILLAGE 54. Method (29)

FACILITIES 55. Type (30) 56. Other Misc. (31)

WATER DEVELOPMENT/CONTROL

59. Structure Type (32)

STORAGE (Ac. Ft.) 60. Flood (33–38)
61. Silt (39–44)

WILDLIFE HABITAT DEVELOPMENT/PROTECTION

62. Type (45–46) 63. Primary Species (47–49)
64. Animal Months (50–54)
65. Number Increase (55–59)
66. Pounds Fish Increase (60–64)
67. Rare/Endangered (65)

VISITOR DAYS ADDED 68. Fisherman (66–69)

69. Hunter (70–73) 70. Other (74–77)

IV – PROGRESS REPORT — Card 4

COMPLETION DATA

UNITS 90. Primary (11–16)
91. Secondary (17–21)

TIME 92. Fiscal Year (22–23)
93. Third (24)

94. Contract No. (25–29) CT

CONTRIBUTION DETAIL

95. Agreement (30) 96. Participant (31)
97. Contributor's Name (32–51)

CONTRIBUTIONS

98. Deposited (52–56)

Undeposited

99. Materials (57–61)
100. Labor/Equipment (62–66)

V – DETAIL ESTIMATE OF UNITS AND COSTS

WORK DESCRIPTION AND MATERIALS (a)	UNITS		BLM COSTS		COOPERATOR COSTS	
	EA MILE, ETC (b)	COST (c)	MATERIALS (d)	CONTRACT (e)	MATERIALS (f)	LABOR (g)
Seed			100	100		
Barrier			100	100		
Equip Rental				200		
TOTALS Materials						
Labor/Equipment						76

Form 1630-8 (February 1977)

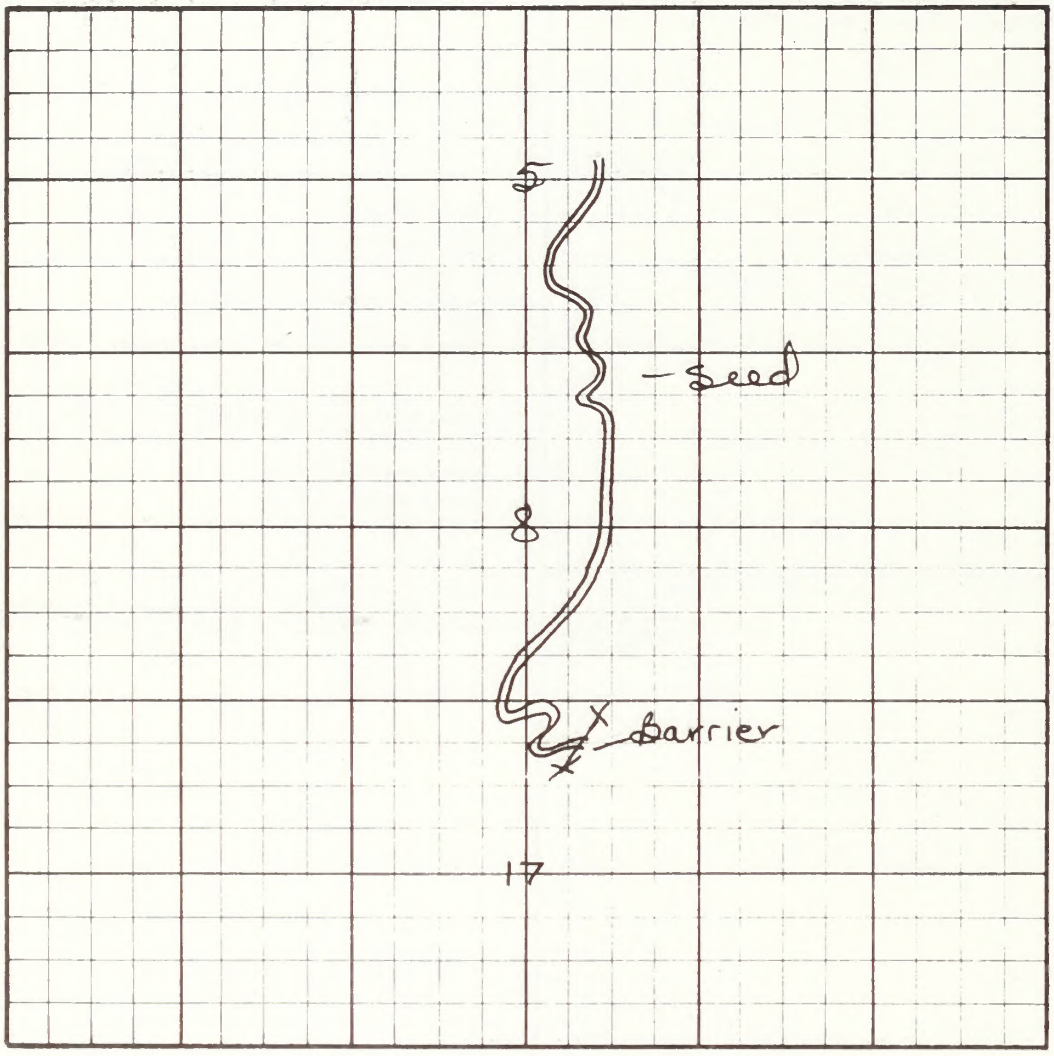
JOB IDENTIFICATION STATE CO DISTRICT 03 JOB NUMBER

VI – LOCATION PLAT

T. 35N R. 9W

Scale 1 inch = Yz mile

Meridian



VII – NARRATIVE DESCRIPTION OR JUSTIFICATION

Seed 3 miles of road and construct a barrier.

Prepared by	Title	Date
T. Reed	Wildlife Biol.	8-78
Approved by	Title	Date

GPO 837-264

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

JOB DOCUMENTATION REPORT

JOB IDENTIFICATION
1. State (2–3)
2. District (4–5)
3. Job No. (6–9)
4. Transaction Code (10)

I – GENERAL DESCRIPTION — Card 1

5. Job Name (11–30): Perins Mine Reclam.

LOCATION CODES
6. Special Project Code (31–34)
7. Planning Unit (35–36)
8. Sub-Basin (37–38) 9. County (39–41)
10. Watershed No. (42–44)
11. Allotment No. (45–48)
12. Wildlife Habitat Area (49–51)

SITE AND VEGETATIVE DESCRIPTION
13. Present SSF (52–53) 14. % Slope (54–55)
15. Exposure (56) 16. Soil Texture (57)
17. Precipitation (inches) (58–59)
18. Elevation (feet) (60–64)
19. Vegetative Subtype (65–67)

COMPOSITION *(Percent)*
20. Grasses (68–69) 21. Forbs (70–71)
22. Browse (72–73)

COVER *(Percent)*
23. Vegetative (74–75) 24. Litter (76–77)
25. Bare Ground (78–79)

II – ANNUAL WORK PLAN INPUT DATA — Card 2

75. Subactivity (11–14): 4350
76. Work Job Code (15–18): 5555

U S PLANNED
77. Primary (19–24)
78. Secondary (25–29)

TIME OF AWARD
79. Fiscal Year (30–31) 80. Third (32)

TIME OF COMPLETION
81. Fiscal Year (33–34) 82. Third (35)

BLM COST 83. Method (36)
84. Material (37–41)
85. Contract (42–47)

CONTRIBUTED COST
86. Material (48–52)
87. Labor/Equipment (53–57)

MAINTENANCE
88. Responsibility (58) 89. Cycle (59–61)

III – JOB DETAILS AND BENEFITS — Card 3

37. Primary Job Objective (11)

PLANT AND PEST CONTROL
39. Chemical (12) 42. Method (13)
45. Mechanical – Method (14)

ARTIFICIAL REVEGETATION
47. Pounds Seed/Acre (15–17)
48. Seedlings/Acre (18–21) 49. Method (22)
51. AUM's Livestock Forage Added (23–26)
52. Future SSF (27–28)

WATERSHED TILLAGE 54. Method (29)

FACILITIES 55. Type (30) 56. Other Misc. (31)

WATER DEVELOPMENT/CONTROL
59. Structure Type (32)
STORAGE (Ac. Ft.) 60. Flood (33–38)
61. Silt (39–44)

WILDLIFE HABITAT DEVELOPMENT/PROTECTION
62. Type (45–46) 63. Primary Species (47–49)
64. Animal Months (50–54)
65. Number Increase (55–59)
66. Pounds Fish Increase (60–64)
67. Rare/Endangered (65)

VISITOR DAYS ADDED 68. Fisherman (66–69)
69. Hunter (70–73) 70. Other (74–77)

IV – PROGRESS REPORT — Card 4

COMPLETION DATA
UNITS 90. Primary (11–16)
91. Secondary (17–21)
TIME 92. Fiscal Year (22–23)
93. Third (24)
94. Contract No. (25–29) CT

CONTRIBUTION DETAIL
95. Agreement (30) 96. Participant (31)
97. Contributor's Name (32–51)

CONTRIBUTIONS
98. Deposited (52–56)
Undeposited
99. Materials (57–61)
100. Labor Equipment (62–66)

V – DETAIL ESTIMATE OF UNITS AND COSTS

WORK DESCRIPTION AND MATERIALS (a)	UNITS EA. MILE, ETC (b)	UNITS COST (c)	BLM COSTS MATERIALS (d)	BLM COSTS CONTRACT (e)	COOPERATOR COSTS MATERIALS (f)	COOPERATOR COSTS LABOR (g)
Equip. rental				1000		
Topsoil or fill						
Seeding & fertilize			1300			
Brush Treatment						
Eq. Rental			1000	600		
TOTALS Materials						
Labor/Equipment						

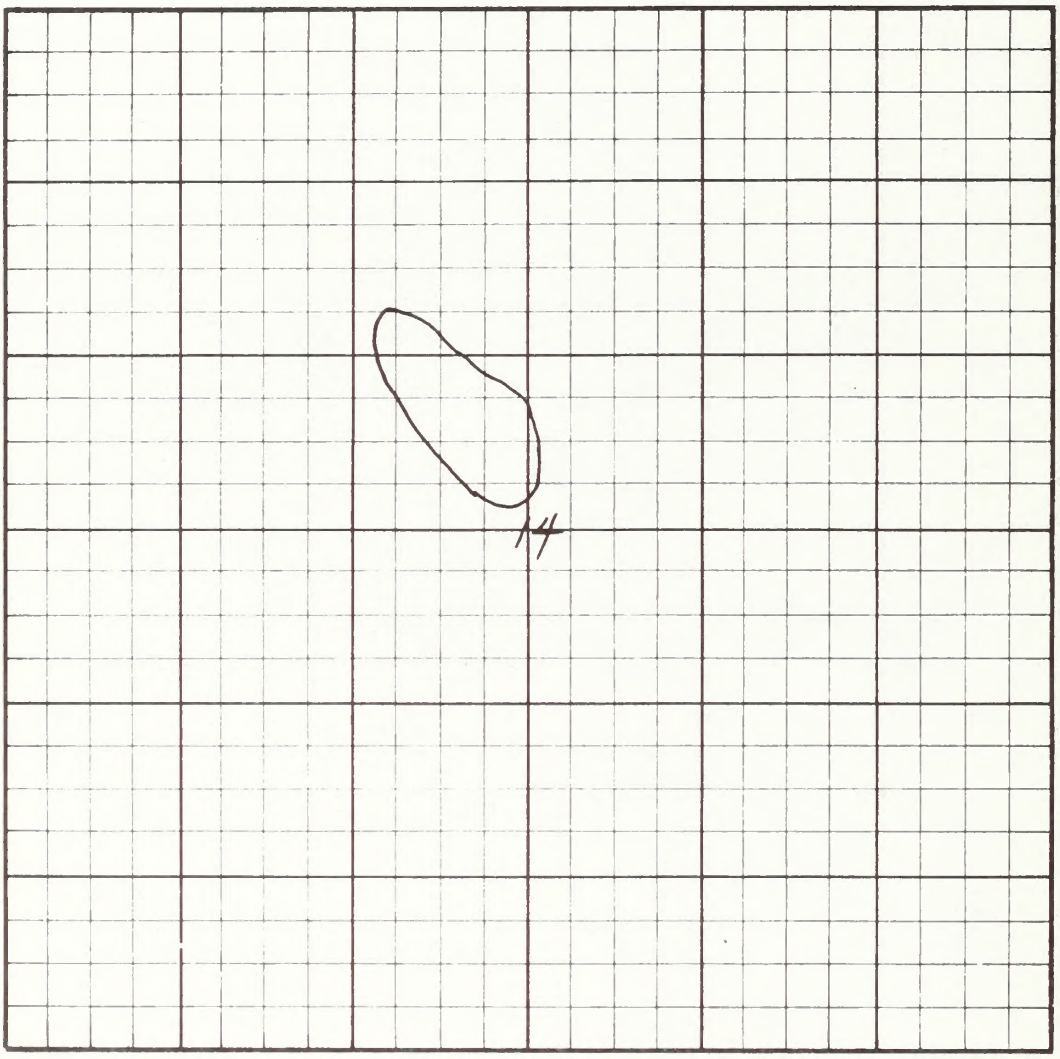
Form 1530-8 (February 1977)

JOB IDENTIFICATION STATE DISTRICT JOB NUMBER

VI – LOCATION PLAT

Scale 1 inch = 1/2 mile

T. 35N R. 10W Meridian



VII – NARRATIVE DESCRIPTION OR JUSTIFICATION

Regrade tailings & spoils pit on old coal mine site 10 acres spread topsoil (6"-12") over 10-20% of area (±2 acres) and crush brush over 50 acres in adjacent meadow area. Seed (grass-forb) and fertilizer 50 acres meadow area.

Prepared by	Title	Date
T. Reed	Wildlife Biol.	8-78
Approved by	Title	Date

GPO 529-264

MANAGEMENT EVALUATIONS AND REVISION

IX. MANAGEMENT EVALUATION AND REVISION

Records of wildlife and vegetation studies for the Perins Peak HMP are kept in the files at the BLM's Durango Office. A schedule of these studies is listed in Table 1, on the following page.

The raptor studies are designed to provide consistent records of species using the WHA nesting cliffs, and their reproductive success. Special studies are scheduled for one year to provide base data on the prey base of the peregrine falcon. Observations of prey species utilized, along with pesticides analysis of a sample of the prey species will identify possible problems. Banding returns from the prey species may help to identify the source regions of pesticide loads. These factors may affect the success of efforts to re-establish the peregrines.

Migration corridor track counts are aimed at evaluating the effectiveness of program efforts to allow continued big game migration to Animas Mountain. The aerial trend counts, extensive vegetation transects, and browse condition and trend studies will indicate the numbers of deer and elk in the area, define changes in critical use areas, and will indicate the health sufficiency or deficiency of the winter forage. Harvest recommendations will in part be based on this data.

Breeding bird and small mammal censuses will be used to evaluate the effect of developing permanent water sources in the area, as well as to gather information for a complete species list.

Project maintenance inspections will be conducted yearly to insure that all developments and fences are kept in repair. Conservation easement compliance checks will be made to insure that private landowners abide by contracts and help retain the habitat values and migration corridors

Effectiveness of vegetation treatments in reaching management objectives for vegetation composition will be evaluated with standard 200 point transects, which will be compared to original inventory data, and short and long term changes.

The HMP will be reviewed at least once annually to evaluate methods, results of studies, and progress toward objectives. The HMP will be revised as needed based on the annual review, new inventory data, and MFP revisions.

All plan revisions will be documented, signed, and dated on the lower left hand corner of the pages affected.

TABLE 1. Schedule of Studies at Perins Peak WHA

Type of Study	Method	Time	Schedule	Agency	MM/Y	Average Cost/Y	Results
Peregrine Nest-Use & Success Checks	Observation	April-June	Annual	DOW & BLM	.1	190	Peregrine Yearly use & success records
Habitat Utilization & Prey Species Study	Observation, Trapping & Banding	April-July	Year 1	DOW & BLM	8.0	15,200	Base data - Period of use, hunting areas, prey species, banding records, pesticides sampling
Raptor Nest Use & Success	Observation	April-June	Annual	BLM	.2	380	All Raptor Use and Success Records
Migration Corridor Use	Track & Pellet counts	November	Annual	BLM	.1	190	Trends of Migration Corridor Use
Elk Trend Counts	Aerial flight Observation	January - February	Annual	DOW	.1	190	Trend Counts
Vegetation Utilization	Extensive transects, Pellet Counts	April-May	5 Annual	DOW & BLM	.5	950	Transect Record, Vegetation Utilization Deer & Elk Use/Acre
Browse Condition & Trend	Extensive transects	May	10 every 3rd year	BLM	.15	285	Browse condition & Trend Records
Vegetation Composition Treatment Evaluation	200 pt. transect	May	Year 2, 5, & 7; after treatment	BLM	.05	95	Vegetation composition record
Breeding Bird Census, Small Mammal Census	Observation, Live trapping, photo evaluation	May	1 year prior to water development & 5 years after	BLM	.02	32	Species Census Records before & after development
Project Maintenance	Observation		Annual	DOW & BLM	.1	190	Maintenance Requirement reports
Conservation Easement Compliance	Observation		Biannual	DOW & BLM	.1	190	Compliance Records

PUBLIC AFFAIRS

X. PUBLIC AFFAIRS

A. Background

The Perins Peak WHA is becoming increasingly important for the health and survival of the mule deer and elk herds of the region, as well as being the breeding and primary hunting grounds for a pair of peregrine falcons. As continued development in the surrounding areas destroys more wildlife habitat and brings increasing recreational pressures, it will be necessary to provide an enhanced environment in the WHA to compensate for this loss. Some of the steps necessary to protect the habitat values and maintain a balanced ecosystem may generate conflict with uninformed public users.

B. Objectives of Public Affairs Efforts

1. Inform the public of the significance and wildlife values of the WHA.

2. Explain the need for habitat protection and enhancement.

3. Encourage cooperation with closures to off-road vehicles or seasonal area closures.

4. Publicize BLM's wildlife habitat management program.

C. Target Groups

1. Local residents and landowners.

2. Hunters, hikers, and wildlife conservation groups.

3. Schools.

4. Other state and federal agencies, county and city planning boards.

D. Techniques, Methods, Materials

1. Slide show presentation.

2. Brochure with access map, species list, brief synopsis.

3. Published copy of HMP - 20 copies.

4. Access point signs - 2.

5. Public presentations.

E. Evaluation

The effectiveness of the public affairs program will be evaluated during the annual HMP review by the district personnel involved.

CONCURRENCE AND
APPROVAL

XI. CONCURRENCE AND APPROVAL

The Perins Peak Habitat Management Plan was prepared, reviewed and approved by the undersigned:

Prepared by: Clair Button — 9/22/78
Clair Button, Wildlife Biologist — Date
San Juan Resource Area

Terry A Reed — 9-22-78
Terry Reed, Wildlife Biologist — Date
Montrose District

Reviewed by: Jerry Kendrick, BLM Area Manager
San Juan Resource Area

Montrose BLM District Office
Resources Staff

Colorado BLM State Office
Resources Staff

Colorado DOW S.W.
Regional Office Staff

Gerry Craig, Colorado DOW and
Peregrine Recovery Team Leader

Approved by: Marlyn Jones — 11/1/78
Marlyn Jones — Date
BLM Montrose District Manager

R. E. Rosette — 12/26/78
Bob Rosette — Date
DOW SW Regional Manager

Dale Andrus — 3/12/79
Dale Andrus, BLM State Director — Date
Colorado

Jack Grieb — 3-19-79
Jack Grieb, Director — Date
Colorado Div. of Wildlife

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

CHECKLIST FOR PREPARATION AND REVIEW OF HABITAT MANAGEMENT PLANS

State: Colorado
District: Montrose
Resource Area: San Juan
Prepared by: Clair Button

HABITAT MANAGEMENT PLAN AREA NAME AND NUMBER	SURNAME	DATE
1. Cooperative Agreement completed	—	
2. Preliminary meeting(s) with officials of the State Department of Fish and Game *(or other appropriate cooperators)* to discuss tentative HMP and wildlife objectives	JAR	10-77
3. Endangered Species Act Compliance Report completed by (WL)		
4. HMP draft prepared by	CB	10-77
5. Reviewed by District Wildlife Specialist	JAR	11-77
6. EAR on draft HMP prepared by	CB	12-77
7. HMP redrafted based on adopted recommendations *(If appropriate, prepare second copy.)*	CB JAR	3-78
Reviewed by District Specialists		
Range	JAR	8-78
Wild Horse(s) and Burro(s)	↓	↓
Lands		
Minerals		
Watershed		
Forestry		
Recreation		
Cultural		
Visual		
Fire Management		
Area Manager		
Support *(Chief of Operations)*		
9. Review of draft by Chief, Resource Management		
10. Final review *(if appropriate)* by State Director		
☑ State Office	ECR	1/15/79
☐ Service Center		
☐ Other *(specify)*		
11. Approved by State wildlife agency authorized officer *(if appropriate)*	RKR JRG	12/26/78 3/19/79
Approved by District Manager	MJ	11/1/78
13. Approval of State Director *(if appropriate)*	DRA	3/12/79

GPO 838-505

Form 6620-1 (December 1976)

Appendix A

Maps

All maps referenced in the text are included in this appendix.

They are as follows:

Land Ownership Map
Grazing Allotment Map
Visual Resources Map
Soils Map
Vegetation Inventory Map
Wildlife Inventory Map
Habitat Improvement Project Map
Habitat Site and Study Area Map
Conservation Easement and Land Acquisition Map

Appendix B

Soils

All range site descriptions and soil mapping unit descriptions are furnished by the U.S. Soil Conservation Service, and apply to Resource Area 48. This information is part of a preliminary soils survey and is subject to further modification.

RANGE SITE DESCRIPTION
Range Site #238 Brushy Loam

PHYSICAL CHARACTERISTICS

1. Physiographic Features

This site occupies gently rolling to steep upland slopes. Degree of slope ranges from 3 to 65%. Aspect ranges from north and east to south and west as the elevation increases. Elevation ranges from 6,000 feet to 9,000 feet above sea level.

2. Climatic Features

Annual precipitation ranges from 15 to 20 inches. At least half of the annual precipitation is in the form of snow. Optimum growing season for native plants is mid-May to mid-July. Winters are typically cold. Range forage plants are favored by spring moisture from accumulated snow. June and July are usually the dry months during the growing period.

3. Native (potential) Vegetation

This site is a shrub dominated community. Serviceberry and oakbrush are the major species. Snowberry, chokecherry, and rose are the other principal shrub species. About 50 to 60 percent of the annual production is made up of grasses. Nodding brome, mountain brome, slender wheat, western wheat, and Letterman and Columbia needlegrasses are the major grass species. Elk sedge is generally the most frequently occurring plant. Major forb species include aspen peavine, fleabane, western yarrow, American vetch, and lupine. Other plants present on this site include oniongrass, big sagebrush, geranium, and low larkspur.

This site is generally treeless, except for scattered aspen which have little or no market value. Optimum ground cover is 60%.

Invaders of this site include rabbitbrush, Kentucky bluegrass, Canada thistle and downy bromegrass.

Range Site #238 Brushy Loam

Native (potential) Vegetation and Guide for Determining Range Condition

Percentage composition by weight of the principal species may total as much as:

Grasses and grasslike		
Mountain brome	10	
Elk sedge	10	
Nodding brome	8	
Slender wheatgrass	7	
Native needlegrass	5	
Western wheatgrass	5	
Junegrass	5	
Native fescues	3	
Oniongrass	2	
Muttongrass	T	
Forbs		
American vetch	3	
Cow parsnip	3	
Western Yarrow	3	
Lupine	3	
Tall bluebells	2	
Aspen peavine	2	
Low larkspur	T	
Bedstraw	T	
Shrubs		
Oakbrush	)	
Serviceberry	)	
Chokecherry	)	35
Snowberry	)	
Rose	5	

SOILS MAPPING UNIT

RCL Haploborolls - Rubble land complex

This complex consists of shallow to deep well drained soils mixed with colluvial deposited boulders, stones, and cobble on mountain sideslopes. Native vegetation is Pinyon pine, Rocky Mountain juniper, oakbrush, and grasses. This unit has potential for rangeland and wildlife.

C5-F Carracas loam, 12 to 65 percent slopes

This mapping unit consists of shallow, well drained soils on mountain slopes. The surface is covered by an organic layer 1 to 3 inches thick. The surface soil is a dark grayish brown loam about 3 inches thick and is underlain by a yellowish brown clay loam. This overlies weathered sandstone or shale at a depth of 10 to 20 inches. Permeability is moderate to bedrock. Erosion hazard is moderate and surface runoff is rapid to very rapid. Available water is low. Vegetation consists of Ponderosa pine, oakbrush, and short grasses.

XC5F Carracas-Sanchez complex, 12 to 65 percent slopes

This is a complex of shallow, well drained soils on gently sloping to steep mountain slopes. The Carracas soil has a surface covered by 1 to 3 inches of organic material. The surface is a dark gray brown loam 3 inches thick. The underlying material is a yellow brown clay loam 6 inches thick. The Sanchez soil has a brown stony sandy clay loam surface 5 inches thick. The subsoil is a dark grayish brown clay loam 10 inches thick. Sandstone bedrock occurs 17 inches below the surface. Permeability is moderate down to bedrock. Available water is low. Surface runoff varies from rapid to very rapid and erosion hazard is moderate. This unit is used mainly for wildlife. The vegetation is Ponderosa pine, Pinyon pine, Rocky Mountain juniper, oakbrush, bitterbrush, sagebrush, mountain mahogany, serviceberry, and native grasses and forbs.

RANGE SITE DESCRIPTION
Range Site #222 Loamy Park

PHYSICAL CHARACTERISTICS

1. Physiographic Features

The site occurs on alluvial slopes, fans, terraces, narrow mountain valleys, and alluvial-colluvial footslopes. It is also on some rolling upland tableland. Much of the site is on slopes of 3 to 12 percent, but may occur on slopes of up to 40 percent. In some places, the site is on windward slopes, and the leeward slopes are forested due to accumulation of windblown snow. Elevations are mostly between 7,000 and 9,500 feet.

2. Climatic Features

Average annual precipitation is 15 to 20 inches in some localities, but is higher in parts of southern Colorado. About 50 percent of the moisture falls as snow. About 40 to 45 percent of the precipitation falls between May 1 and September 1. Major native plants make most active growth between mid-May and mid-August. Average frost-free periods range from 50 to 100 days. Evaporation rates may be fairly high during spring windy periods and warm, dry spells, but the yearly moisture deficit is low.

3. Native (potential) Vegetation

Mountain bunchgrasses give a characteristic grassy park appearance to the site. Dominant grasses are usually Arizona fescue, mountain muhly, and Parry oatgrass. Others which may be important are nodding brome, mountain brome, slender wheatgrass, western wheatgrass, Columbia and Letterman needlegrass, needle and thread, Junegrass, and sedges. Small amounts of muttongrass, pine dropseed, Thurber fescue, blue grama, slimstem muhly, squirreltail, sheep fescue, spike fescue, Sandberg bluegrass, and several others may be present. A variety of forbs are conspicuous when in bloom, but do not make up more than 15 percent of the annual yield.

Trees are absent except for an occaisional stray from adjacent woodlands. Tree species associated with the site are Ponderosa pine, Douglas fir, white fir, lodgepole pine, and aspen.

Species most likely to invade or increase from trace amounts are Kentucky bluegrass, sleepygrass, knotweed, trailing fleabane, pussytoes, mullein, mat muhly, slimstem muhly, and rubber rabbitbrush.

Range Site #222 Loamy Park

Native (potential) Vegetation and Guide for Determining Range Condition

Percentage composition by weight of the principal species may total as much as:

Grasses and grasslike	
Arizona fescue	30
Mountain muhly	30
Parry oatgrass	30
Western wheatgrass	15
Slender wheatgrass	10
Bearded wheatgrass	10
Junegrass	10
Needle and thread	10
Columbia and Letterman needlegrass	10
Other grasses	5
Forbs	
Native forbs	15
Shrubs	
Douglas rabbitbrush	3
Fringed sage	2
All others	10

SOILS MAPPING UNIT

V5-CD Clayburn loam, 3 to 12 percent slopes

This is a deep, well drained soil on mountain valleys and valley fill sideslopes. The upper part of the surface layer is a dark grayish brown loam 5 inches thick. The lower part is a dark grayish brown loam 4 inches thick. The upper subsoil is a dark grayish brown clay loam 6 inches thick. The middle part is a dark grayish brown clay loam 7 inches thick, and the lower part is also dark grayish brown clay loam 8 inches thick. The substratum is a brown and light brownish gray fine sandy loam to a depth of 60 inches or more. Permeability is moderately slow. Water capacity is high and erosion hazard is low. Vegetation is Englemann spruce, Douglas fir, and native grasses.

V2-CD Hesperus loam, 3 to 12 percent slopes

This is a deep dark colored and well drained soil on gently sloping to moderately sloping mountain slopes, alluvial fans, and valley bottoms. The surface is a dark grayish brown loam 13 inches thick. The top portion of the subsoil is a dark gray clay loam 8 inches thick. The middle is a grayish brown clay loam 13 inches thick, and the lower portion is a pale brown clay loam 13 inches thick. The substratum is a pale brown sandy clay loam. Permeability is slow to moderate. Surface runoff is medium to rapid. The erosion hazard is slight. Water capacity is high. Vegetation is serviceberry, lupine, big sagebrush, and native grasses.

V9-CD Connerton loam, 3 to 12 percent slopes

This is a deep, well drained soil on alluvial fans and toeslopes of foothills. The surface layer is a weak red loam 18 inches thick. The substratum is a reddish brown loam or silt loam to a depth of 60 inches or more. Permeability is moderately slow to moderate. Water capacity is high and erosion hazard is moderate. Vegetation is Pinyon pine, oakbrush, and native grasses.

RANGE SITE DESCRIPTION
Range Site #241 Mountain Meadow

PHYSICAL CHARACTERISTICS

1. Physiographic Features

The site occurs in mountain valleys, swales, parks, and around potholes. Topography is nearly level to fairly steep. There may be slight irregularities, but the terrain is generally smooth. Slopes are mostly 0 to 3 percent, but are steeper in a few places. They have no significant influence on plant growth. Elevation ranges from about 7,000 to 11,500 feet.

2. Climatic Features

Average annual precipitation is from 15 to 40 inches, half or more coming in the form of snow. However, the key to existence of the site is natural subirrigation in a cool mountain climate rather than amount of precipitation. The site may therefore exist on drier areas (down to about 10 inches annual precipitation) where summers are short and cool enough. Native plants start their main growth from mid-May to early June and continue through mid-July or August. The growing season varies because of the wide range in elevation over which the site occurs. Frost-free periods range from 50 to 100 days.

3. Native (potential) Vegetation

Grasses and sedges give the site its characteristic appearance, although a great variety of forbs are showy when in bloom and may comprise up to 20 percent of the annual yield. Nebraska sedge or other large sedges are dominant on the lowest, usually permanently wet areas. Tufted hairgrass dominates slightly higher ground. Other common grass or grass-like plants are slender wheatgrass, ovalhead sedge, Baltic rush, Canada bluegrass, and bluejoint and northern reedgrass. Thurber fescue and sheep fescue may show up on drier portions at higher elevations. Some of the prominent forbs are also common to lower meadow sites, native clovers, Rocky Mountain iris, asters, arnicas, groundsels, herbaceous cinquefoils, mints, yarrow, golden pea, vetch, and water hemlock. Willow usually makes up a minor part of the plant community.

Tree species are not natural to the site. Ground cover is about 70 percent.

Species likely to invade or increase as site condition declines are timothy, Kentucky bluegrass, Canada thistle, Baltic rush, iris, yarrow, and herbaceous cinquefoil.

Range Site #241 Mountain Meadow

Native (potential) Vegetation and Guide for Determining Range Condition

Percentage composition by weight of the principal species may total as much as:

Grasses and grasslike		
Tufted hairgrass	50	
Nebraska sedge	30	
Slender wheatgrass	20	
Ovalhead sedge	15	
Baltic rush	5	
Other sedges and rushes	5	
Other grasses	5	
Forbs		
Yarrow	)	5
Iris	)	
Herbaceous cinquefoil	5	
Other forbs	5	
Shrubs		
Willow	10	
Other shrubs	5	

SOILS MAPPING UNIT

V4-CD Big Blue clay loam, 3 to 12 percent slopes

This is a deep, poorly drained soil on low terraces and valley bottoms. The upper part of the surface layer is a dark grayish brown clay loam 8 inches thick. The lower part is a dark grayish brown silty clay 8 inches thick. The subsoil is a gray silty clay 10 inches thick. The substratum is a gray, calcareous silty clay to 60 inches or more. Gleying and mottles are common in the subsoil and substratum. Permeability is slow. Water capacity is high. Surface runoff is slow and erosion hazard is slight. Vegetation is sedges, rushes, and native grasses.

RANGE SITE DESCRIPTION
Range Site #288 Rocky Foothills

PHYSICAL CHARACTERISTICS

1. Physiographic Features

Topography is generally steep and somewhat broken. Elevations range from 5,500 to 7,000 feet.

2. Climatic Features

Precipitation averages 12 to 18 inches annually. Slightly less than half of this falls as winter snow. May and June are the driest months, while July and August generally receive the most moisture. The optimum growing season is about April 15 to July 1, following spring thaw. Temperatures range from below zero to 90 degrees F. The evaporation rate in summer is generally high enough to affect plant growth, especially on south exposures.

3. Native (potential) Vegetation

An open stand of Pinyon pine and juniper with a patchy understory of shrubs and grass is typical of the site. The kind and amount of vegetation will vary to some degree with differences in slope, exposure, and soil depth. The main grasses include Indian ricegrass, needle and thread, western wheatgrass, Junegrass, native bluegrasses, bearded wheatgrass, and galleta. Shrubs such as mountain mahogany, bitterbrush, four-wing saltbush, and fendler bush are an important part of the cover.

Optimum ground cover is 25 to 30 percent.

Species likely to invade or increase on this site are sleepy grass, Oregon grape, gumweed, western wheatgrass, galleta, blue grama, oakbrush, rabbitbrush, snakeweed, and cactus.

Range Site #288 Rocky Foothills

Native (potential) Vegetation and Guide for Determining Range Condition

Percentage composition by weight of the principal species may total as much as:

Grasses and grasslike		
Western wheatgrass	20	
Galleta	10	
Blue grama	5	
Squirreltail	5	
Sand dropseed	5	
Sedges	5	
Mountain muhly	5	
Arizona fescue	5	
Needle and thread	2	
Indian ricegrass	1	
Forbs		
American vetch	5	
Indian paintbrush	5	
Globemallow	4	
Lupine	)	
Penstemon	)	
Yarrow	)	15% with 5%
Herbaceous sage	)	limit for any
Aster	)	one species
Shrubs and Trees		
Pinyon and juniper	15	
Cliffrose	5	
Rabbitbrush	5	
Big sagebrush	5	
Mormon tea	5	
Oakbrush	)	
Snowberry	)	
Serviceberry	)	10
Fendlerbush	)	
Squawapple	)	
Mountain mahogany	3	
Bitterbrush	3	
Four-wing saltbush	3	

SOILS MAPPING UNIT

XMO-F Lazear-Rock outcrop complex, 12 to 65 percent slopes

This complex consists of a shallow, well drained soil on sandstone breaks of upland mesas and areas of sandstone outcrop. The lazear soil makes up 55 percent of this unit and the outcrop makes up 35 percent. The upper part of the surface layer is a brown stony loam 5 inches thick. The lower part is a light yellowish brown loam 4 inches thick. The underlying material is a very pale brown loam that overlies sandstone bedrock between 15 and 20 inches. Permeability is moderate. Water capacity is low. Surface runoff is moderate and erosion hazard is moderate. This unit is used mainly for range and wildlife. Vegetation is big sagebrush and native grasses.

RANGE SITE DESCRIPTION
Range Site Ponderosa Pine Woodland

PHYSICAL CHARACTERISTICS

1. Physiographic Features

This site occurs from 6,000 to 8,500 feet elevation. Toeslopes and bottoms are the best positions for Ponderosa pine. Midslopes are good positions, and ridgetops are the least favorable.

2. Climatic Features

Average annual precipitation is 16 inches or greater. The frost-free period is from 30 to 100 days, with average annual temperatures of 42 degrees to 50 degrees F.

3. Native (potential) Vegetation

Ponderosa pine usually occurs in pure stands, but may contain Douglas fir, White fir, Limber pine, or aspen at upper limits and some Pinyon pine or Rocky Mountain juniper at the lower limits of the type. Oakbrush, serviceberry, mountain mahogany, snowberry, ground juniper, kinnikinnick, Arizona fescue, mountain muhly, pussytoes, western wheatgrass, fringed sage, strawberry, blue grama, and wild geranium compose the understory.

Ponderosa pine is intolerant to shade. Optimum canopy cover is less than 50 percent.

Species which may invade or increase on this site include Kentucky bluegrass, cheatgrass, sand dropseed, three awn, snakeweed, rabbitbrush, western wheatgrass, sedges, Junegrass, bluegrama, oakbrush, serviceberry, and snowberry.

Range Site Ponderosa Pine Woodland

Native (potential) Vegetation and Guide for Determining Range Condition

Percentage composition by weight of the principal species may total as much as:

Grasses and grasslike		
Western wheatgrass	20	
Needle grasses	10	
Junegrass	10	
Blue grama	15	
Sedges	5	
Squirreltail	5	
Sheep fescue	T	
Forbs		
Yarrow	)	15% total with 5% limit for any one species
Lupine	)	
Penstemon	)	
Golden pea	)	
Aspen peavine	)	
Herbaceous sage	)	
Hairy gold aster	)	
Shrubs		
Oakbrush	5	
Serviceberry	5	
Snowberry	5	
Mountain mahogany	5	
Rose	T	

SOILS MAPPING UNIT

XM1-E Valto-Rock outcrop complex, 12 to 65 percent slopes

This unit is a complex of rock outcrop and a shallow well drained soil on mountain slopes and ridges. The surface layer is typically a dark reddish gray stony fine sandy loam 2 inches thick. The upper portion of the subsoil is a light reddish brown very stony fine sandy loam 10 inches thick. The lower portion is fractured sandstone bedrock. About 45 percent of this complex is Valto very stony fine sandy loam. Rock outcrop accounts for 35 percent. Permeability is moderate to moderately rapid. Runoff is moderately rapid and the erosion hazard is low. Available water is low. Vegetation is Ponderosa pine, oakbrush, native grasses and forbs.

XM6-D Fortwingate-Rock outcrop complex, 6 to 25 percent slopes

This unit is a moderately deep, well drained soil and rock outcrop on moderately sloping to moderately steep mountain slopes. The surface of Fortwingate is covered by 1 to 3 inches of organic material. The surface is a dark brown stony fine sandy loam 1 inch thick. The lower portion is a pinkish gray stony fine sandy loam 8 inches thick. The upper portion of the subsoil is a brown loam 20 inches thick. The lower portion (B3) is a strong brown stony clay loam 10 inches thick. Sandstone bedrock will occur at 32 inches. About 45 percent is Fortwingate stony fine sandy loam and 35 percent is rock outcrop. Permeability is moderately slow to slow. Water capacity is moderate. Surface runoff is moderate and erosion hazard is low. Vegetation is Ponderosa pine, oakbrush, native grasses and forbs.

M6-CD Fortwingate stony fine sandy loam, 3 to 12 percent slopes

This is a moderately deep, well drained soil on gently sloping to strongly sloping mountain slopes. The surface, a dark brown stony fine sandy loam 1 inch thick, is covered with one to three inches of organic material. The lower portion of the surface layer is a pinkish gray stony fine sandy loam about 8 inches thick. The upper portion of the subsoil is a strong brown stony clay loam 10 inches thick. At 32 inches, sandstone bedrock occurs. Permeability is moderately slow to slow. Available water is moderate. Surface runoff is moderate and erosion hazard is low. Vegetation is Ponderosa pine, native grasses, and shrubs.

RANGE SITE DESCRIPTION
Range Site #291 Shaly Foothills

PHYSICAL CHARACTERISTICS

1. Physiographic Features

This site occurs on rolling hills to steep, rough, shaly breaks. Slopes range from about 15 to 35 percent. Elevation is about 5,500 to 7,500 feet.

2. Climatic Features

Precipitation averages 12 to 15 inches. About half of this occurs as snow. Cool season grasses are favored and make their best growth following the spring thaw from April 15 to July 1.

3. Native (potential) Vegetation

This is a sparse grass, shrub, and forb community. Pinyon pine and juniper may occur in variable amounts. The density of trees and understory varies considerably according to slope, exposure, soil depth, and amount of erosion. Important grasses include bluebunch wheatgrass, Indian ricegrass, needle and thread, western wheatgrass, galleta, and native bluegrasses. Shrubs are often the major component of the cover and may include mountain mahogany, bitterbrush, Mormon tea, sagebrush, serviceberry, four-wing saltbush, and cactus. Forbs include stemless goldenweed, wild buckwheat, penstemon, groundsel, loco and milkvetch.

Optimum cover is 15 to 25 percent.

No Range Condition Guide is presently available.

SOILS MAPPING UNIT

E6-CE Midway clay and clay loam, 3 to 25 percent slopes

This is a shallow, well drained soil on ridges and hills, and shale bedrock uplands. The surface layer is light brownish gray clay about 3 inches thick. The underlying material is light gray clay that overlies soft shale at about 8 to 20 inches. Permeability is very slow. Water capacity is low. Surface runoff is rapid and erosion hazard is high. Vegetation is Pinyon pine, Rocky Mountain juniper, and native grass.

RANGE SITE DESCRIPTION
Range Site #228 Mountain Loam

PHYSICAL CHARACTERISTICS

1. Physiographic Features

Topography is mainly alluvial-colluvial slopes, terraces, fans, or valley positions. Slopes average between 5 to 10 percent, but may reach 40 percent. Elevation ranges from 7,000 feet to 9,500 feet.

2. Climatic Features

Average annual precipitation is 15 to 20 inches, of which about 50 percent falls as snow. Optimum growing season for native plants is early spring through summer. The frost-free period ranges from 30 to 100 days. This site normally has deep snow cover through the winter.

3. Native (potential) Vegetation

Grass, in association with minor amounts of woody plants such as sagebrush and snowberry and several forbs accounts for most of the vegetative cover. This site is treeless; however, trees are often in the general vicinity. Dominant grasses are Idaho and/or Arizona fescue, slender wheatgrass, bearded wheatgrass, native bluegrasses, nodding brome, mountain brome, Letterman and pine needlegrass. Mountain muhly and Parry oatgrass are important in some locations. Lupine, geranium, goundsel, and bluebells are the principle forbs.

Optimum groundcover is 35 percent.

Species most likely to invade or increase on this site are blue grama, cheatgrass, slimstem muhly, three awn, rubberweed, broom snakeweed, tall rabbitbrush, phlox, nailwort, and sagebrush.

Range Site #228 Mountain Loam

Native (potential) Vegetation and Guide for Determining Range Condition

Percentage composition by weight of the principal species may total as much as:

Grasses and grasslike	
Idaho and/or Arizona fescue	40
Bearded wheatgrass	30
Needle grasses	30
Slender wheatgrass	20
Native bluegrass	20
Western wheatgrass	15
Mountain muhly	15
Parry oatgrass	15
Mountain brome	10
Nodding brome	10
Sandberg bluegrass	10
Sheep fescue	10
Thurber fescue	7
Squirreltail	7
Forbs	
Eriogonum	5
Balsamroot	5
Shrubs	
Big sagebrush	10
Fringed sage	5
Low rabbitbrush	5
Bitterbrush	5
Snowberry	5
Serviceberry	5

SOILS MAPPING UNIT

A3-B Jodero loam, 1 to 3 percent slopes

This is a deep, well drained soil on valley bottoms and small fans. The upper part of the surface layer is a reddish gray fine sandy loam 5 inches thick. The middle part is a reddish gray loam 15 inches thick. The underlying material is brown loam to a depth of 60 inches or more. Permeability is moderate. Water capacity is high. Surface runoff is slow and erosion hazard is moderate. Vegetation is Gambel oak and native grasses.

SOILS MAPPING UNIT

(No Range Site Description)

Bd Badlands

This is steep or very steep, nearly barren land. Ordinarily it is not stony, but may have small rock outcrops, and is broken by numerous intermittent drainage channels. This land type normally occurs in areas of shale outcrop with very scattered and sparse vegetative cover.

Rl Rock outcrop

Rockland consists of areas having enough rock outcrop and very shallow soil to obliterate other soil characteristics. It occurs on slopes ranging from gentle to very steep. Vegetation is sparse, consisting of a few native shrubs, some Pinyon and juniper and scattered native forbs and grasses. Wildlife makes some use of this unit. Erosion is moderate, mostly of a geologic nature.

Appendix C

Vegetation

The following comments refer to information listed in the enclosed Habitat Site Description.

Composition - Percent of total vegetation hits in four height levels on pace transect.

Utilization - Percent utilization of current annual growth.

Vegetation is listed by standard abbreviations of scientific name (eg: Pinus ponderosa = Pipo).

Deer and elk use are measured in deer days per acre (DDA) and elk days per acre (EDA).

PLANT SPECIES LIST

The following species list was compiled during the November-January inventory effort. Because of the seasonal and time limitations, this list is incomplete, with most species of forbs and some grasses unidentifiable at the time of inventory. Further efforts will be made to update the list.

Grasses or Grasslike

Agropyron cristatum	Crested wheatgrass
Agropyron smithii	Western wheatgrass
Agropyron trachycanlum	Slender wheatgrass
Aristeda longiseta	Three Awn
Bouteloua gracilis	Blue Grama
Bromus inermis	Smooth Brome
Bromus tectorum	Cheatgrass
Carex spp.	Sedge
Festuca spp.	Fescue
Festuca thurberi	Thurber Fescue
Hilaria jamesii	Galleta Grass
Jancus spp.	Rush
Muhlenbergia asperifolia	Alkali Muhly
Muhlenbergia montanus	Mountain Muhly
Oryzopsis hymenoides	Indian ricegrass
Phleum pratense	Timothy
Poa pratensis	Kentucky Bluegrass
Poa secunda	Sandberg's Bluegrass
Poa spp.	Bluegrass
Sitanion hystrix	Bottlebrush Squirreltail
Sporobolis cryptandrus	Sand Dropseed
Stipa comata	Needle and Thread

Forbs

Achillea lanutosa	Yarrow
Amaranthus spp.	Pigweed
Astragalus spp.	Locoweed
Brassica spp.	Mustard
Chenopodium album	Lambsquarter
Cirsium americana	Thistle
Eriogonum spp.	Buckwheat
Ipomopsis	Gilia
Iris missouriensis	Wild Iris
Lathyrus spp.	Peavine
Luninus spp.	Lupine
Meidcago sativa	Alfalfa

Forbs (Continued)

Oxytropis spp.	Loco
Senecio	Groundsel
Sphaeralicea spp.	Globemallow
Thalictrum spp.	Meadowrue
Trifolium spp.	Clover
Verbascum thapsis	Mullein
Vicia spp.	Vetch

Shrubs and Trees

Abies concolor	White Fir
Acer negundo	Box Elder
Amelanchier alnifolia	Serviceberry
Artemesia filifolia	Sand Sagebrush
Artemesia nova	Black Sagebrush
Artemesia tridentata	Big Sagebrush
Atriplex canescens	Fourwing Saltbush
Berberis fendleri	Colorado Barberry
Berberis repens	Oregon Grape
Ceanothus fendleri	Fendler Ceanothus
Cerococarpus montanus	Mountain Mahogany
Chrysothamnus nauseousus	Rubber Rabbitbrush
Cornus stolonifera	Red-osier Dogwood
Crateagus spp.	Hawthorne
Fendlera rupicola	Cliff Fenderbush
Gutierrezia sarathrae	Snakeweed
Juniperus communis	Common Juniper
Juniperus scopulorum	Rocky Mountain Juniper
Opuntia spp.	Prickly Peak Cactus
Pachystima myrsinites	Myrtle Boxleaf
Peraphyllum ramosissimum	Squawapple
Pinus edulis	Pinyon Pine
Pinus ponderosa	Ponderosa Pine
Populua angustifolia	Narrowleaf Cottonwood
Populus tremuloides	Trembling Aspen
Prunus virginiana	Common Chokecherry
Psuedostuga menziesii	Douglas Fir
Purshia tridentata	Bitterbrush
Quercus gambeli	Gambel Oak
Rhus trilobata	Skunkbrush
Rosa spp.	Rose
Salix spp.	Willow
Shepherdia argentea	Silver Buffaloberry
Symphoricarpos spp.	Snowberry
Tetradymia canescens	Gray Horsebrush
Yucca spp.	Yucca

Standard Land Form Codes

1. Standard Land Forms

ALF - Alluvial Fan
ALP - Alluvial Plain
ARY - Arroyo
BAA - Bajada
BAL - Badland
BAR - Barranca
BFL - Basin Floor
BNC - Bench
BTT - Butte
CAL - Caldera
CAN - Canyon
CES - Cuesta
DOM - Dome
ENR - Endogenic Rock
EXR - Exogenic Rock
FPL - Flood Plain
GCR - Glacial Cirque
GMR - Glacial Moraine
GOW - Glacial Outwash
GTO - Glacial Trough
GUL - Gully
HBK - Hogback
HIL - Hill
IPR - Intermittent Playa Riparian
ISR - Intermittent Stream Riparian
KRS - Karst
LCP - Lacrustine Plain
MSA - Mesa
MTN - Mountain
OLR - Lake Riparian
ORR - Reservoir Riparian
OSR - Perennial Stream Riparian
PED - Pediment
PEP - Peneplain
PMT - Piedmont
PYA - Playa
RDG - Ridge
SBS - Subsidence
SDL - Saddle
SDN - Sand Dune
SNK - Sinkhole
SRP - Scarp
TRC - Terrace
VAL - Valley

2. Standard Wetland-Riparian Forms

BMR - Bog Marsh Riparian
BPR - Beaver Pond Riparian
IPR - Intermittent Playa Riparian
ISR - Intermittent Stream Riparian
OLR - Lake Riparian
ORR - Reservoir Riparian
OSR - Perrenial Stream Riparian
SUR - Sub-Riparian
WMR - Wet Meadow Riparian

VEGETATION TRANSECT RECORD SUMMARY

SITE	DESCRIPTION	SPECIES COMPOSITION										FORAGE DENSITY
	PONDEROSA PINE WOODLANDS											
P001	Mesatop-SW Aspect	Ponderosa	31%	Juniper	21%	Gambel Oak	27%	Mt. Mahogany	4%	Squirreltail	3%	33%
P007	Bench-E Aspect	Ponderosa	25%	Snowberry	14%	Gambel Oak	46%	Oregon Grape	4%	Bluegrass	6%	28%
P005	Ridge-S Aspect	Ponderosa	11%	Juniper	7%	Gambel Oak	54%	Snowberry	8%	Bluegrass	10%	27%
P014	Ridge-S Aspect	Ponderosa	10%	Snowberry	14%	Gambel Oak	32%	Bluegrass	14%	Other grasses	31%	18%
P020	Mesatop-SE Aspect	Ponderosa	13%	Douglas Fir	2%	Gambel Oak	50%	Snowberry	16%	Grasses	12%	32%
P021	Bench-W Aspect	Ponderosa	8%	Snowberry	12%	Gambel Oak	39%	Sedge	4%	Bluegrass	25%	
	DOUGLAS FIR											
P003	Drainage-N Aspect	Douglas Fir	33%	Mt. Mahogany	6%	Gambel Oak	25%	Serviceberry	7%	Bluegrass	6%	29%
P006	Slope-N Aspect	Douglas Fir	52%	Snowberry	12%	Gambel Oak	13%	Serviceberry	11%	Oregon Grape	4%	30%
	PINON-JUNIPER WOODLANDS											
P012	Ridge Slope-S Aspect	Pinon Pine	8%	Juniper	16%	Gambel Oak	56%	Mt. Mahogany	4%	Bitterbrush	6%	21%
P023	Ridge Slope-SE Aspect	Ponderosa	7%	Juniper	8%	Gambel Oak	59%	Mt. Mahogany	6%	Snowberry	14%	35%
	ASPEN											
P024	Valley-SE Drainage	Trembling Aspen	15%	Snowberry	12%	Gambel Oak	31%	Chokecherry	7%	Dogwood	5%	31%
P026	Valley-SE Drainage	Trembling Aspen	28%	Chokecherry	9%	Gambel Oak	14%	Forbs	7%	Bluegrass	35%	52%
	RIPARIAN											
P008-01	Intermittent Stream	Willow	64%	Cattail	2%	Bluegrass	24%	Wheatgrass	4%	Sedge	2%	27%
P008-02	Intermittent Stream	Cottonwood	44%	Snowberry	11%	Rose	2%	Forbs	7%	Bluegrass	26%	16%
	MEADOW											
P009	Valley	Snowberry	1%	Brome	79%	Bluegrass	20%					
P010	Valley	Aster	14%	Alfalfa	5%	Bluegrass	7%	Brome	16%	Crested Wheat	51%	29%
P011	Valley	Aster	7%	Alfalfa	1%			Crested Wheat	91%			25%
P013	Valley	Sand Sage	18%	Fescue	11%	Bluegrass	6%	Blue Grama	25%	Needle & Thread	31%	37%
P025-01	Valley-Wet Meadow	Thistle	8%	Forbs	10%	Juncus	52%	Alkali Muhly	16%	Sedge	13%	20%
P025-02	Valley	Aster	16%	Wheatgrass	4%	Bluegrass	23%	Brome	42%	Sedge	8%	75%
	MOUNTAIN SHRUB											
P002	Mesatop-SW Aspect	Snowberry	15%	Gambel Oak	47%	Serviceberry	3%	Rose	4%	Bluegrass	18%	31%
P004	Ridge Slope-N Aspect	Snowberry	18%	Gambel Oak	40%	Serviceberry	12%	Barberry	10%	Hawthorne	7%	51%
P015	Ridge Slope-SW Aspect	Snowberry	27%	Gambel Oak	53%	Mt. Muhly	9%	Fescue	7%	Other Grasses	2%	36%
P016	Ridge Slope-E & NE Aspect	Snowberry	28%	Gambel Oak	51%	Serviceberry	1%	Mt. Mahogany	1%	Sedge	12%	50%
P017	Bench-SW Aspect	Snowberry	18%	Gambel Oak	43%	Chokecherry	5%	Bluegrass	9%	Other Grasses	15%	25%
P018	Ridgetop-W-SW Aspect	Snowberry	24%	Gambel Oak	57%	Chokecherry	1%	Mt. Mahogany	1%	Grasses	11%	38%
P019	Ridge Slope-W-SW Aspect	Snowberry	11%	Gambel Oak	38%	Serviceberry	5%	Ponderosa	2%	Bluegrass	6%	33%
P022	Ridgetop-S-SW Aspect	Snowberry	24%	Gambel Oak	38%	Mt. Muhly	13%	Bluegrass	8%	Other Grasses	15%	49%

HABITAT SITE P001 PIPO--QUGA--MSA

Composition (%)

Present		Objective
Pipo	31	30
Quga	27	20
Jusc	21	20
Cemo	4	5
Pied	3	3
Putr	T	T
Amal	T	5
Grasses	3	5
Forbs	7	7
Forage Density	12	20

Forage Utilization (%)

Present (5 Year Average)		Objective
Cemo	51	60
Quga	24	50
Putr	38	40

Deer and Elk Use (5 Year Average)

Present		Objective
DDA	16	20
EDA	30	35

Ponderosa Pine Woodland Range Site

HABITAT SITE P009 - BRIN--POA---VAL

Composition (%)

Present		Objective
Brin	79	No Change
Poa	20	
Symp	1	
Rosa	T	
Sihy	T	
Agro	T	

Forage Utilization

Present (1 Year Fall Measurements)	
Brin	10-20
Poa	10
Forbs	30

Deer and Elk Use

Data Not Available

Loamy Park Range Site

HABITAT SITE P012 - JUSC--QUGA--RDG

Composition (%)

Present		Objective
Quga	56	50
Jusc	16	16
Pied	8	8
Putr	6	6
Poa	5	10
Cemo	4	4
Symp	1	1
Forbs	2	5
Sihy	T	T

Forage Utilization (%)

Present (4 Year Average)		Objective
Quga	34	Temporary Reduction
Cemo	43	
Symp	7	

Deer and Elk Use

Present		Objective
DDA	10	3
EDA	30	5-10

Brushy Loam Range Site

HABITAT SITE P013 - STCO--BOGR--BNC

Composition (%)

Present		Objective
Stco	31	31
Bogr	25	25
Arfi	18	0
Fesc	11	15
Poa	6	8
Quga	4	0
Agsm	2	15
Sihy	2	5
Chna	1	0

Forage Utilization (%)

Present (1 Year Fall Measurement)	
Chna	80
Lupine	70
Poa	10

Deer and Elk Use

Present		Objective
DDA	13	4
EDA	36	5

Loamy Park Range Site

HABITAT SITE P017 - QUGA--SYMP--BNC

Composition (%)

Present		Objective
Quga	43	20
Symp	18	15
Prvi	5	7
Poa	9	15
Sihy	5	10
Cheno	5	5
Other Grasses	12	20
Other Forbs	3	8

Forage Utilization (%)

Present (4 Year Average)		Objective
Quga	28	40
Symp		
Prvi	80	70

Deer and Elk Use (5 Year Average)

Present		Objective
DDA	13	20
EDA	36	45

Loamy Park Range Site

HABITAT SITE P019 - QUGA--SYMP--RDG

Composition (%)

Present		Objective
Quga	74	50
Symp	11	15
Amal	5	10
Cemo	T	5
Poa	6	10
Rosa	1	5
Forbs	2	5

Forage Utilization (%)

Present (5 Year Average)		Objective
Quga	22	30
Cemo	49	60
Amal	24	40

Deer and Elk Use (5 Year Average)

Present		Objective
DDA	13	18
EDA	30	40

Brushy Loam Range Site

HABITAT SITE P022 - QUGA--SYMP--RDG

Composition (%)

Present		Objective
Quga	38	No Change
Symp	24	
Momu	13	
Poa	8	
Fescue	6	
Bogr	5	
Other Grasses	6	
Pipo	T	

Forage Utilization (%)

Present (1 Year Fall Measurement)	
Quga	15
Symp	5
Momu	5

Deer and Elk Use

No Data Available

Ponderosa Pine Woodland Range Site

HABITAT SITE P023 - JUSC--QUGA--RDG

Composition (%)

Present		Objective
Quga	59	40
Symp	14	15
Jusc	8	8
Pipo	7	7
Cemo	6	8
Rosa	2	5
Amal	1	5
Poa	1	7
Forbs	2	5

Forage Utilization (%)

Present (1 Year Fall Measurements)		Objective
Quga	0	30
Cemo	20	50
Amal	30	40
Rosa	10	10

Deer and Elk Use

Data Not Available

Brushy Loam Range Site

HABITAT SITE P025-01 - JUNC--MUAS--WMR

Composition (%)

Present		Objective
Juncus	51	No Change
Muas	16	
Carex	13	
Cirsium	8	
Irmi	7	
Aster	3	
Poa	1	
Brin	1	

Forage Utilization (%)

Present (1 Year Fall Measurement)	
Juncus	5
Carex	10
Muas	0
Irmi	50

Deer and Elk Use

Data Not Available

Mountain Meadow Range Site

Appendix D

Wildlife

TABLE 1. ELK HARVEST AND POST-HUNT POPULATION IN DAU E-30

Year	Antlered Harvest*	Non-Antlered Harvest*	Total Harvest*	Post-Hunt Population**
1973	314	140	454	2,530
1974	291	45	336	2,611
1975	308	61	369	2,730
1976	381	62	443	2,838

** Computer model estimate
* Data from "Colorado Big Game Harvest", Department of Natural Resources Division of Wildlife

TABLE 2. MULE DEER HARVEST AND POST-HUNT POPULATION IN DAU D-29 AND GMU74

Year	Total Harvest DAU D-29*	Total Harvest GMU74*	Post-Hunt Population DAU D-29**
1973	2,685	1,297	13,287
1974	1,772	1,035	14,182
1975	1,116	452	15,528
1976	1,203	567	16,894
1977	-	-	18,229
1978	-	-	19,295

**Computer model estimate
* Data from "Colorado Big Game Harvest", Department of Natural Resources Division of Wildlife

TABLE 3. HERMOSA-JUNCTION CREEK ELK TREND COUNTS

Year	Sub-total of Sectors 1, 2, & 3	Total Count
1973	443	896
1974	263	562
1975	527	962
1976	- No Count	-
1977	- No Count	-
1978	368	734

Amphibians and Reptiles of La Plata County, Colorado
(from Maslin and Horst 1973)

Scientific name	Common name
Class Amphibia	
Order Caudata	
Family Ambystomatidae	
Ambystoma tigrinum	Tiger Salamander
Order Salientia	
Family Pelobatidae	
Scaphiopus hammondi	Western Spadefoot
Family Bufonidae	
Bufo woodhousei	Woodhouse's Toad
Family Hylidae	
Pseudacris triseriata	Chorus Frog
Family Ranidae	
Rana pipiens	Leopard Frog
Class Reptilia	
Order Testudines	
Family Emyidae	
Chrysemys picta	Painted Turtle
Order Squamata	
Suborder Sauria	
Family Iguanidae	
Crotaphytus collaris	Collared Lizard
Phrynosoma douglassi	Short-horned Lizard
Sceloporus graciosus	Sagebrush Lizard
Sceloporus undulatus	Eastern Fence Lizard
Urosaurus ornatus	Tree Lizard
Family Teiidae	
Cnemidophorus velox	Plateau Whiptail
Family Scincidae	
Eumeces multivirgatus	Many-lined Skink
Suborder Serpentes	
Family Colubridae	
Lampropeltis triangulum	Milk Snake
Opheodrys vernalis	Smooth Green Snake
Pituophis melanoleucus	Gopher Snake
Thamnophis cyrtopsis	Black-necked Garter Snake
Thamnophis elegans	Western Terrestrial Garter Snake
Family Crotalidae	
Crotalus viridis	Western Rattlesnake

Birds of Southwestern Colorado (based on a checklist compiled by the Durango Bird Club). Those species marked with an asterisk (*) have been seen in the HMP area or local vicinity. The other species have been seen in Southwestern Colorado since 1950 by memvers of the Durango Bird Club, and may occur in the HMP area. The two columns to the right of each species indicate relative abundance and seasonal occurence in Southwestern Colorado. For an explanation of the symbols used, see the end of the list.

Scientific name	Common name	Rel. Abund.	Seas. Occ.
Class Aves			
Order Gaviiformes			
Family Gaviidae			
Gavia immer	Common Loon	P	SF
Gavia arctica	Arctic Loon	A	U
Order Podicipediformes			
Family Podicipedidae			
Podiceps auritus	Horned Grebe	P	SF
Podiceps caspicus	Eared Grebe	UC	SF
Aechmorphorus occidentalis	Western Grebe	UC	SF
Podilymbus podiceps	Pied-Billed Grebe	C	N
Order Pelicaniformes			
Family Phalacrocoracidae			
Phalacrocorax auritus	Double-crested Cormorant	P	U
Order Ciconiiformes			
Family Ardeidae			
*Ardea herodias	Great Blue Heron	C	Y
Butorides virescens	Green Heron	A	U
Bubulcus ibis	Cattle Egret	A	U
Leucophoyx thula	Snowy Egret	P	SF
Nycticorax nycticorax	Black-crowned Night Heron	UC	N
Botaurus lentiginosus	American Bittern	UD	N
Family Ciconidae			
Plegadis chihi	White-faced Ibis	P	SF
Order Anseriformes			
Family Anatidae			
Subfamily Cyginae			
Olor columbianus	Whistling Swan	P	S
Subfamily Anserinae			
Branta canadensis	Canada Goose	P	SF
Chen hyperborea	Snow Goose	P	SF

		Rel. Abund.	Seas. Occ.
Order Anseriformes			
Family Anatidae			
Subfamily Anatinae			
*Anas platyrhynchos	Mallard	C	Y
*Anas strepera	Gadwall	P	SF
*Anas acuta	Pintail	P	SF
*Anas carolinensis	Green-winged Teal	C	Y
*Anas discors	Blue-winged Teal	P	SF
*Anas cyanoptera	Cinnamon Teal	P	N
*Mareca americana	American Wigeon	P	SF
Spatula clypeata	Shoveler	P	SF
Aix sponsa	Wood Duck	P	SF
Subfamily Aythyinae			
Aythya collaris	Ring-necked Duck	C	Y
Aythya americana	Redhead	P	U
Aythya valisineria	Canvasback	P	SF
Aythya affinis	Lesser Scaup	P	SF
*Bucephala clangula	Common Goldeneye	C	W
*Bucephala albeola	Bufflehead	P	W
Melanitta perspicillata	Surf Scoter	A	U
Clangula hyemalis	Oldsquaw	A	U
Subfamily Oxyurinae			
Oxyura jamaicensis	Ruddy Duck	C	N
Subfamily Merginae			
Lophodytes cuculatus	Hooded Merganser	P	W
*Mergus merganser	Common Merganser	C	Y
Mergus serrator	Red-breasted Merganser	P	SF
Order Falconiformes			
Family Cathartidae			
*Cathartes aura	Turkey Vulture	C	N
Family Accipitridae			
*Accipiter gentilis	Goshawk	UC	Y
*Accipiter striatus	Sharp-shinned Hawk	C	Y
*Accipiter cooperii	Coopers Hawk	UC	Y
*Buteo jamaicensis	Red-tailed Hawk	C	Y
*Buteo swainsoni	Swainson's Hawk	P	SF
*Buteo lagopus	Rough-legged Hawk	P	W
Buteo regalis	Ferruginous Hawk	A	U
*Aquila chrysaetos	Golden Eagle	C	Y
*Haliaeetus leucocephalus	Bald Eagle	E	W
*Circus cyaneus	Marsh Hawk	UC	Y
Family Pandionidae			
*Pandion haliaetus	Osprey	UC	N
Family Falconidae			
*Falco mexicanus	Prairie Falcon	UD	Y
*Falco peregrinus	Peregrine falcon	E	N
Falco columbarius	Merlin	UD	Y
*Falco sparverius	American Kestrel	C	Y

		Rel. Abund.	Seas. Occ.
Order Galliformes			
Family Tetraonidae			
*Dendragapus obscurus	Blue Grouse	C	Y
Lagopus leucurus	White-tailed Ptarmigan	C	Y
Centrocercus urophasianus	Sage Grouse	UC	Y
Callipepla squamata	Scaled Quail	P	Y
*Lophortyx gambelii	Gambel's Quail	P	Y
*Phasianus colchicus	Ring-necked Pheasant	UC	Y
*Alectoris graeca	Chukar	P	Y
Family Meleagrididae			
*Meleagris gallopavo	Turkey	UC	Y
Order Gruiformes			
Family Gruidae			
Grus canadensis	Sandhill Crane	P	SF
Family Rallidae			
Rallus limicola	Virginia Rail	UD	N
Porzana carolina	Sora	UC	N
*Fulica americana	American Coot	C	N
Order Charadriiformes			
Family Charadriidae			
Charadrius semipalmatus	Semipalmated Plover	P	SF
*Charadrius vociferus	Killdeer	C	Y
Squatavola squatavola	Black-bellied Plover	A	U
Family Scolopacidae			
*Capella gallinago	Common Snipe	UC	Y
*Actitis macularia	Spotted Sandpiper	C	N
Tringa solitaria	Solitary Sandpiper	P	SF
Catoptrophorus semipalmatus	Willet	P	
*Totanus melanoleucus	Greater Yellowlegs	P	SF
Totanus flavipes	Lesser Yellowlegs	P	SF
Erolia fuscicollis	White-rumped Sandpiper	UD	SF
Erolia bairdii	Baird's Sandpiper	UD	SF
Erolia minutilla	Least Sandpiper	P	SF
Limnodromus scolopaceus	Long-billed Dowitcher	P	SF
Micropalama himantopus	Stilt Sandpiper	P	SF
*Ereunetes mauri	Western Sandpiper	P	SF
Ereunetes pusillus	Semipalmated Sandpiper	P	SF
Limosa fedoa	Marbled Godwit	P	SF
Family Recurvirostridae			
Recurvirostra americana	American Avocet	P	SF
Himantopus mexicanus	Black-necked Stilt	P	SF
Family Phalaropodidae			
*Steganopus tricolor	Wilson's Phalarope	P	SF
Lobites lobatus	Northern Phalarope	P	SF

		Rel. Abund.	Seas. Occ.
Order Charadriiformes			
Family Laridae			
Larus californicus	California Gull	P	SF
Larus delawarensis	Ring-billed Gull	P	SF
Larus pipixcan	Franklin's Gull	P	SF
Larus philadelphia	Bonaparte's Gull	P	SF
Sterna foresteri	Forester's Tern	P	SF
Chilidonias niger	Black Tern	P	SF
Order Columbiformes			
Family Columbidae			
*Columba fasciata	Band-tailed Pigeon	UC	N
*Columba livia	Rock Dove	C	Y
*Zenaidura macroura	Mourning Dove	C	N
Order Cuculiformes			
Family Cuculidae			
Geococcyx californianus	Roadrunner	P	U
Order Strigiformes			
Family Strigidae			
Otus asio	Screech Owl	UC	Y
Otus flammeolus	Flammulated Owl	UC	N
*Bubo virginianus	Great Horned Owl	C	Y
*Glaucidium gnoma	Pygmy Owl	UC	Y
Speotyto cunicularia	Burrowing Owl	UC	N
Asio otus	Long-eared Owl	UD	Y
Aegolius acadicus	Saw-whet Owl	UD	Y
Order Caprimulgiformes			
Family Caprimulgidae			
*Phalaenoptilus nuttallii	Poor-will	UC	N
*Chordeiles minor	Common Nighthawk	C	N
Order Apodiformes			
Family Apodidae			
Cypseloides niger	Black Swift	UC	N
*Aeronautes saxatalis	White-throated Swift	C	N
Family Trochilidae			
*Archilochus alexandri	Black-chinned Hummingbird	C	N
Calypte anna	Anna's Hummingbird	A	
*Selasphorus platycercus	Broad-tailed Hummingbird	C	N
*Selasphorus rufus	Rufous Hummingbird	C	N
Stellula calliope	Calliope Hummingbird	P	N
Lampornis clemenciae	Blue-throated Hummingbird	A	
Order Coraciiformes			
Family Alcedinidae			
*Megaceryle alcyon	Belted Kingfisher	C	Y

		Rel. Abund.	Seas. Occ.
Order Piciformes			
Family Picidae			
*Colaptes auratus	Common Flicker	C	Y
*Asyndesmus lewis	Lewis's Woodpecker	UC	Y
*Sphyrapicus varius	Yellow-bellied Sapsucker	C	N
*Sphyrapicus thyroideus	Williamson's Sapsucker	UC	N
*Dendrocopus villosus	Hairy Woodpecker	C	Y
*Dendrocopos pubescens	Downy Woodpecker	C	Y
Picoides tridactylus	Northern Three-toed Woodpecker	UC	Y
Order Passeriformes			
Family Tyrannidae			
Tyrannus tyrannus	Eastern Kingbird	P	SF
*Tyrannus verticallis	Western Kingbird	C	N
*Tyrannus vociferans	Cassin's Kingbird	UC	N
Muscivora forfic	Scissor-tailed Flycatcher	A	
*Myiarchus cinerascens	Ash-throated Flycatcher	UC	N
*Sayornis saya	Say's Phoebe	C	N
*Empidonax difficilis	Western Flycatcher	C	N
Empidonax traillii	Trail's Flycatcher	UD	N
Empidonax hammondii	Hammond's Flycatcher	UD	N
Empidonax oberholseri	Dusky Flycatcher	UD	N
Empidonax wrightii	Gray Flycatcher	UD	N
*Contopus sordidulus	Western Wood Pewee	C	N
Nuttallornis borealis	Olive-sided Flycatcher	C	N
Family Alaudidae			
*Eremophila alpestris	Horned Lark	C	Y
Family Hirundinidae			
*Tachycineta thalassina	Violet-green Swallow	C	N
*Iridoprocne bicolor	Tree Swallow	UC	N
*Riparia riparia	Bank Swallow	UC	N
*Stelgidopteryx ruficollis	Rough-winged Swallow	C	N
*Hirundo rustica	Barn Swallow	C	N
*Petrochelidon pyrrhonota	Cliff Swallow	C	N
Progne subis	Purple Martin	P	U
Family Corvidae			
Perisoreus canadensis	Gray Jay	C	Y
Cyanocitta cristata	Blue Jay	A	
*Cyanocitta stelleri	Steller's Jay	C	Y
*Aphelocoma coerulescens	Scrub Jay	C	Y
*Pica pica	Black-billed Magpie	C	Y
*Corvus corax	Common Raven	C	Y
*Corvus Brachyrhynchos	Common Crow	C	Y
*Gymnorhinus cyanocephalus	Pinyon Jay	C	Y
*Nucifraga columbiana	Clark's Nutcracker	C	Y

Order Passeriformes		Rel. Abund.	Seas. Occ.
Family Paridae			
*Parus atricapillus	Black-capped Chickadee	C	Y
*Parus gambeli	Mountain Chickadee	C	Y
*Parus inoranatus	Plain Titmouse	UC	Y
*Psaltriparus minimud	Common Bushtit	UC	Y
Family Sittidae			
*Sitta carolinensis	White-breasted Nuthatch	C	Y
*Sitta canadensis	Red-breasted Nuthatch	UC	W
*Sitta pygmaea	Pigmy Nuthatch	C	Y
Family certhiidae			
*Certhia familiaris	Brown Creeper	UC	Y
Family Cinclidae			
*Cinclus mexicanus	Dipper	C	Y
Family Troglodytidae			
*Troglodytes aedon	House Wren	C	N
*Thryomanes bewickii	Bewick's Wren	UC	N
Telmatodytes palustris	Long-billed Marsh Wren	A	
*Catherpes mexicanus	Canyon Wren	UC	N
*Salpinctes obsoletus	Rock Wren	UC	N
Family Mimidae			
*Mimus polyglottos	Mockingbird	P	N
*Dumetella carolinensis	Gray Catbird	UC	N
Toxostoma rufum	Brown Thrasher	A	
*Oreoscoptes montanus	Sage Thrasher	P	N
Family Turdidae			
*Turdus migratorius	American Robin	C	Y
*Hylocichla guttata	Hermit Thrush	C	N
Hylocichla ustulata	Swainson's Thrush	UC	N
*Sialia mexicana	Western Bluebird	C	N
*Sialia currucoides	Mountain Bluebird	C	N
*Myadestes townsendi	Townsend's Solitaire	C	Y
Family Sylviidae			
*Polioptila caerulea	Blue-gray Gnatcatcher	C	N
Regulus satrapa	Golden-crowned Kinglet	UC	Y
*Regulus calendula	Ruby-crowned Kinglet	C	Y
Family Motacillidae			
*Anthus spinoletta	Water Pipit	C	N
Family Bombycillidae			
Bombycilla garrulus	Bohemian Waxwing	P	W
Bombycilla cedrorum	Cedar Waxwing	UC	Y
Family Laniidae			
Lanius excubitor	Northern Shrike	P	W
*Lanius ludvicianus	Loggerhead Shrike	UC	Y
Family Sturnidae			
*Sturnus vulgaris	Starling	C	Y
Family Vireonidae			
Vireo vicinior	Gray Vireo	P	N

Order Passeriformes		Rel. Abund.	Seas. Occ.
Family Vireonidae			
*Vireo solitarius	Solitary Vireo	C	N
Vireo olivacenus	Red-eyed Vireo	P	U
*Vireo gilvus	Warbling Vireo	C	N
Family Parulidae			
Helmitheros vermivorus	Worm-eating Warbler	A	U
Vermivora peregrina	Tennessee Warbler	UD	F
Vermivora celata	Orange-crowned Warbler	C	N
Vermivora ruficapilla	Nashville Warbler	A	U
*Vermivora virginiae	Virginia's Warbler	C	N
*Dendroica petechia	Yellow Warbler	C	N
*Dendroica coronata	Yellow-rumped Warbler	C	N
Dendroica nigrescens	Black-throated Gray Warbler	UC	N
*Dendroica townsendi	Townsend's Warbler	P	F
Dendroica graciae	Grace's Warbler	UC	N
Dendroica pennsylvanica	Chestnut-sided Warbler	A	U
Dendroica striata	Blackpoll Warbler	A	U
Seiurus noveboracensis	Northern Waterthrush	P	SF
Oporonis tolmiei	Kentucky Warbler	C	N
*Oporonis tolmiei	MacGillivray's Warbler	C	N
*Geothlypis trichas	Yellowthroat	UC	N
*Icteria virens	Yellow-breasted Chat	C	N
*Wilsonia pusilla	Wilson's Warbler	C	N
*Setophaga ruticilla	American Redstart	P	SF
Family Ploceidae			
*Passer domesticus	House Sparrow	C	Y
Family Icteridae			
Dolichonyx oryzivorus	Bobolink	A	U
*Sturnella neglecta	Western Meadowlark	C	N
*Xanthocephalus xanthocephalus	Yellow-headed Blackbird	UC	N
*Agelaius phoeniceus	Red-winged Blackbird	C	Y
*Icterus glabula	Northern Oriole	C	N
*Duphagus cyanocephalus	Brewer's Blackbird	C	N
Quiscalus quiscula	Common Grackle	P	SF
Cassodix mexicanis	Great-tailed Grackle	A	U
Molothrus ater	Brown-headed Cowbird	C	N
Family Thraupidae			
*Piranga ludoviciana	Western Tananger	C	N
Family Fringillidae			
*Pheucticus ludovicianus	Rose-breasted Grosbeak	P	SF
*Pheucticus melanocephalus	Black-headed Grosbeak	C	N
*Guiraca caerulea	Blue Grosbeak	UC	N
*Passerina cyanea	Indigo Bunting	P	N
*Passerina amoena	Lazuli Bunting	UC	N
*Hesperiphona vespertina	Evening Grosbeak	C	Y
Carpodacus purpureus	Purple Finch	A	U
*Carpodacus cassinii	Cassin's Finch	C	Y
*Carpodacus mexicanus	House Finch	C	Y

Order Passeriformes

Family Fringillidae

Pinicola enucleator	Pine Grosbeak	UC	Y
*Leucosticte tephrocotis	Gray-crowned Rosy Finch	UC	W
*Leucosticte atrata	Black Rosy Finch	UC	W
*Leucosticte australis	Brown-capped Rosy Finch	UC	W
Acanthis flammea	Common Redpoll	A	U
Spinus pinus	Pine Siskin	C	Y
*Spinus tristis	American Goldfinch	C	Y
*Spinus Psaltria	Lesser Goldfinch	C	N
Loxia curvirostra	Red Crossbill	UC	Y
*Chlorura chlorura	Green-tailed Towhee	C	N
*Pipilo erythrophthalmus	Rufous-sided Towhee	C	Y
Calamospiza melanocorys	Lark Bunting	P	S
Passerculus sandwichensis	Savannah Sparrow	P	SF
*Pooecetes gramineus	Vesper Sparrow	C	N
Chondestes grammacus	Lark Sparrow	UC	N
Aimophila cassinii	Cassin's Sparrow	A	U
*Amphispiza bilineata	Black-throated Sparrow	P	SF
*Amphispiza belli	Sage Sparrow	UC	N
*Junco hyemalis	Dark-eyed Junco	C	W
*Junco caniceps	Gray-headed Junco	C	Y
*Spizella arborea	Tree Sparrow	P	W
*Spizella passerina	Chipping Sparrow	C	N
Spizella pallida	Clay-colored Sparrow	A	U
*Spizella breweri	Brewer's Sparrow	UC	N
Zonotrichia querula	Harris' Sparrow	P	W
*Zonotrichia leucophrys	White-crowned Sparrow	C	Y
Zonotrichia atricapilla	Golden-crowned Sparrow	A	U
Zonotrichia albicollis	White-throated Sparrow	P	SF
*Passerella iliaca	Fox Sparrow	P	SF
Melospiza lincolnii	Lincoln's Sparrow	C	N
*Melospiza melodia	Song Sparrow	C	Y

(Explanations of the symbols used are on the next page)

Relative Abundance

C	-	Common	- A species whose population levels are relatively high and compatible with the existing habitat.
UC	-	Uncommon	- A species whose population levels are relatively low and compatible with the existing habitat.
P	-	Peripheral	- A species which is at the edge of its geographic distribution.
T	-	Threatened	- A species which is not in immediate jeopardy of extinction, but is vulnerable because it exists in such small numbers or is extremely restricted throughout all or a significant portion of its range, that it may become endangered if the total population continues to decline or if environmental conditions deteriorate.
E	-	Endangered	- A species whose prospects for survival and reproduction are in jeopardy, or are likely to become so within the foreseeable future.
UD	-	Undetermined	- A species about which present information is insufficient to accurately determine status.
A	-	Accidental	- A species that has been sighted in southwestern Colorado five or fewer times.

Seasonal Occurrance

Y	- A year-round resident
N	- A bird that nests in the area but leaves during the winter months
S	- Spring migrant
F	- Fall migrant
W	- A bird that is present during the winter months but does not nest in the area
U	- Unknown

Mammals of La Plata and Montezuma Counties, Colorado
(From Armstrong 1972)

	COMMON NAME
Class Mammalia	
Order Marsupialia	
Didelphis marsupialis	opossum
Order Insectivora	
Sorex cinereus	Masked Shrew
Sorex cagrans	Wandering Shrew
Sorex nanus	Dwarf Shrew
Sorex palustris	Water Shrew
Sorex merriami	Merriam's Shrew
Notiosorex crawfordi	Desert Shrew
Order Chiroptera	
Myotis yumanensis	Yuma Myotis
Myotis evotis	Long-eared Myotis
Myotis tysanodes	Fringed Myotis
Myotis volans	Long-legged Myotis
Myotis californicus	California Myotis
Myotis leibii	Small-footed Myotis
Lasionycteris noctivagans	Silver-haired Bat
Pipistrellus hesperus	Western Pipistrelle
Eptesicus fuscus	Big Brown Bat
Lasiurus cinereus	Hoary Bat
Plecotus townsendii	Townsend's Big-eared Bat
Antrozous pallidus	Pallid Bat
Tadarida brasiliensis	Brazilian Free-tailed Bat
Order Lagomorpha	
Ochotona princeps	Pika
Sylvilagus nuttalli	Nuttall's Cottontail
Sylvilagus audubonii	Desert Cottontail
Lepus americanus	Snowshoe Hare
Lepus townsendii	White-tailed Jackrabbit
Lepus californicus	Black-tailed Jackrabbit
Order Rodentia	
Eutamias minimus	Least Chipmunk
Eutamias quadrivittatus	Colorado Chipmunk
Mormota flaviventris	Yellow-bellied Marmot
Ammospermophilus leucurus	White-tailed Antelope Squirrel
Spermophilus spilosoma	Spotted Ground Squirrel
Spermophilus variegatus	Rock Squirrel
Spermophilus lateralis	Golden-mantled Ground Squirrel
Cynomys gunnisoni	Gunnison's Prairie Dog
Sciurus aberti	Abert's Squirrel
Tamiasciurus hundsonicus	Chickaree

Class Mammalia

Order Rodentia

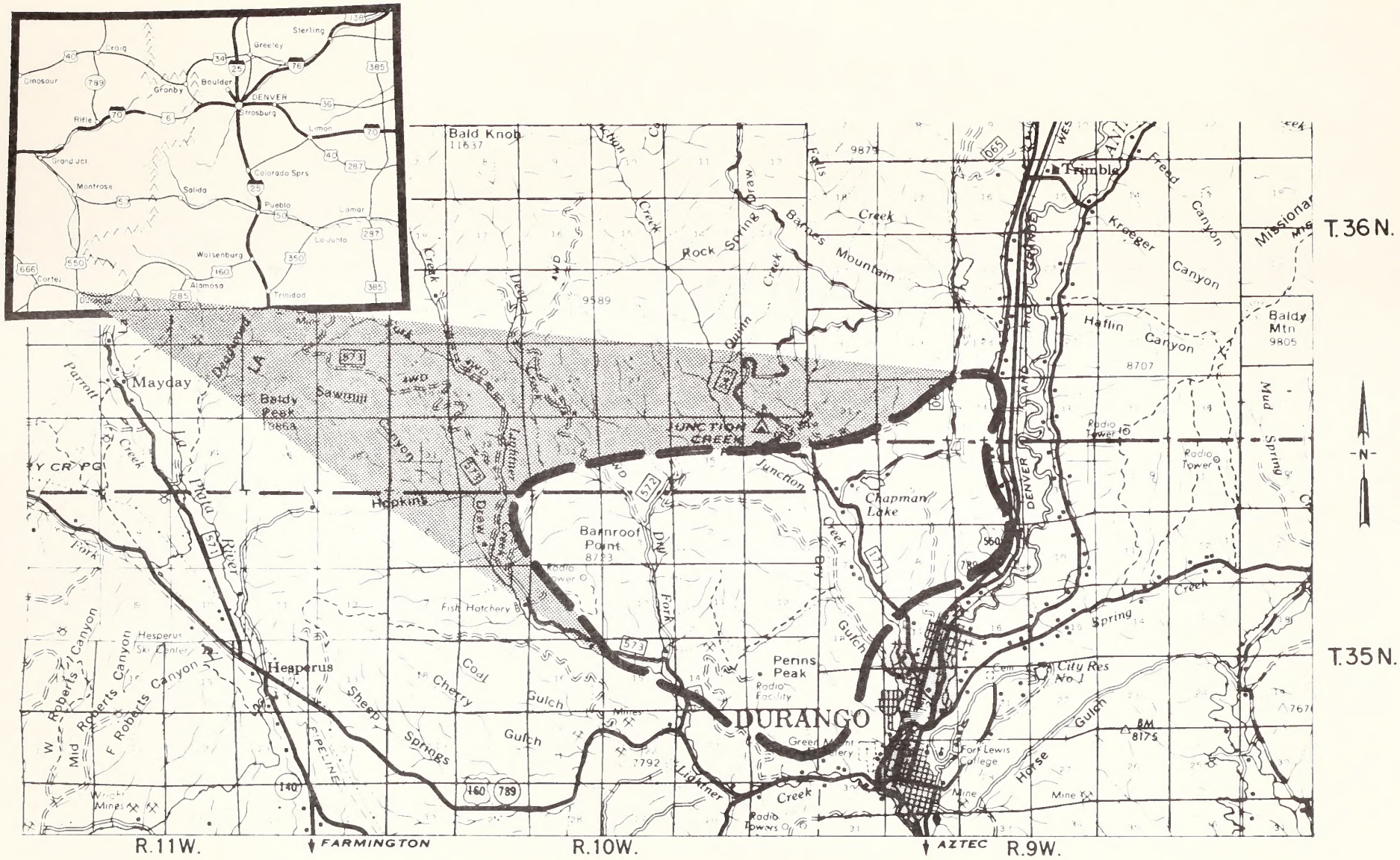
Thomomys bottae	Valley Pocket Gopher
Thomomys talpoides	Northern Pocket Gopher
Perognathus apache	Apache Pocket Mouse
Perognathus flavus	Silky Pocket Mouse
Dipodomys ordii	Ord's Kangaroo Rat
Gastor canadensis	Beaver
Reithrodontomys megalotis	Western Harvest Mouse
Peromyscus crinitus	Canyon Mouse
Peromyscus maniculatus	Deer Mouse
Peromyscus boylii	Brush Mouse
Peromyscus truei	Pinyon Mouse
Onychomys leucogaster	Northern Grasshopper Mouse
Neotoma albigula	White-throated Woodrat
Neotoma mexicana	Mexican Woodrat
Neotoma cinerea	Brushy-tailed Woodrat
Clethrionomys gapperi	Capper's Red-backed Vole
Phenacomys intermedius	Heather Vole
Microtus montanus	Montane Vole
Microtus longicaudus	Long-tailed Vole
Microtus mexicanus	Mexican Vole
Ondatra zibethicus	Muskrat
Zapus princeps	Western Jumping Mouse
Erethizon dorsatum	Porcupine

Order Carnivora

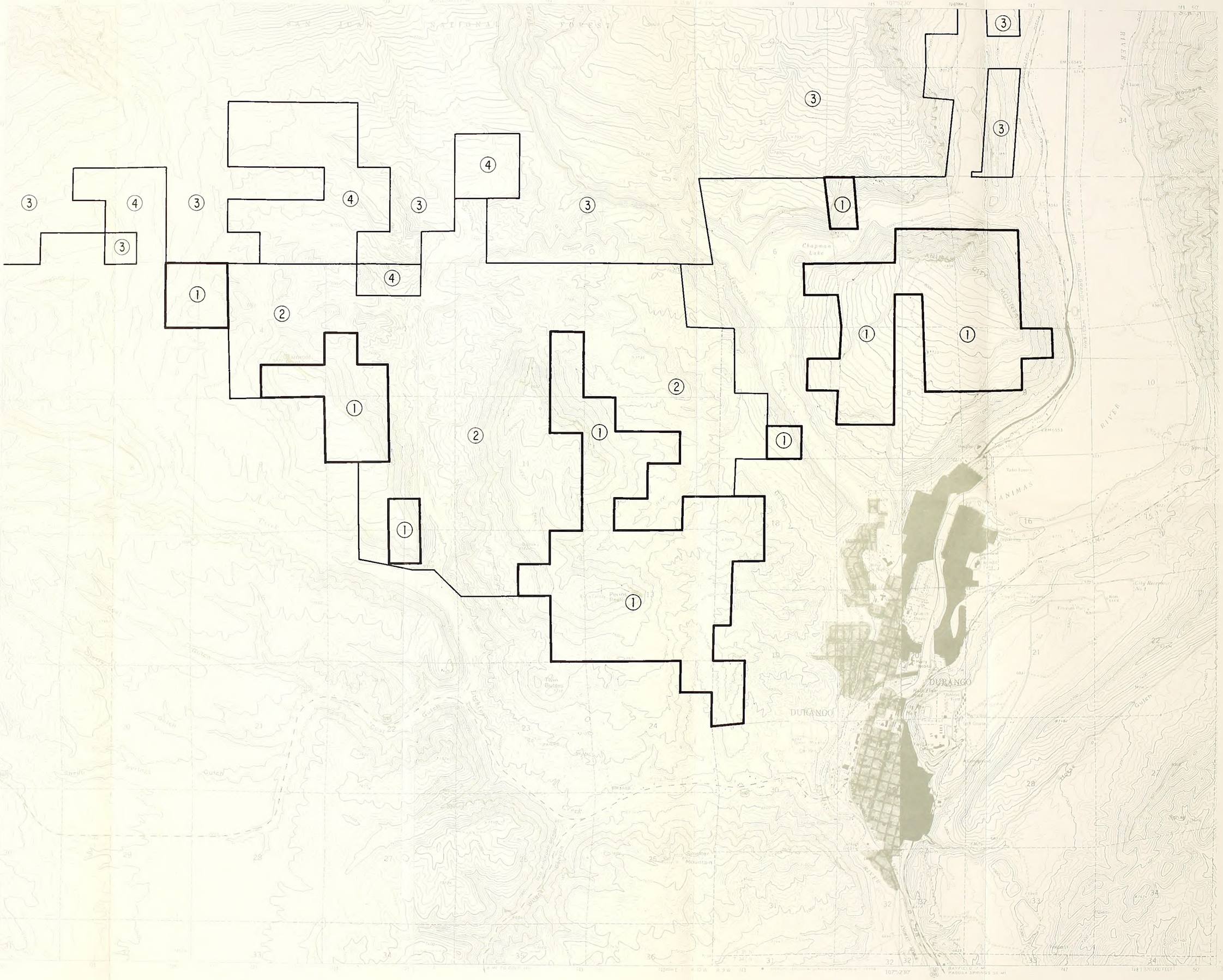
Canis latrans	Coyote
Canis lupus	Wolf
Vulpes vulpes	Red Fox
Vulpes macrotis	Kit Fox
Urocyon cinereoagrenteus	Gray Fox
Bassariscus astutus	Ringtail
Procyon lotor	Raccoon
Ursus americanus	Black Bear
Martes americana	Marten
Mustela erminea	Ermine
Mustela frenata	Long-tailed Weasel
Mustela nigripes	Black-footed Ferret
Mustela vison	Mink
Taxidea taxus	Badger
Spilogale putorius	Spotted Skunk
Mephitis mephitis	Striped Skunk
Felis concolor	Mountain Lion
Lynx canadensis	Lynx
Lynx rufus	Bobcat

Order Artiodactyla

Cervus canadensis	American Elk
Odocoileus hemionus	Mule Deer
Ovis canadensis	Bighorn Sheep



LOCATION MAP
PERINS PEAK WILDLIFE HABITAT AREA



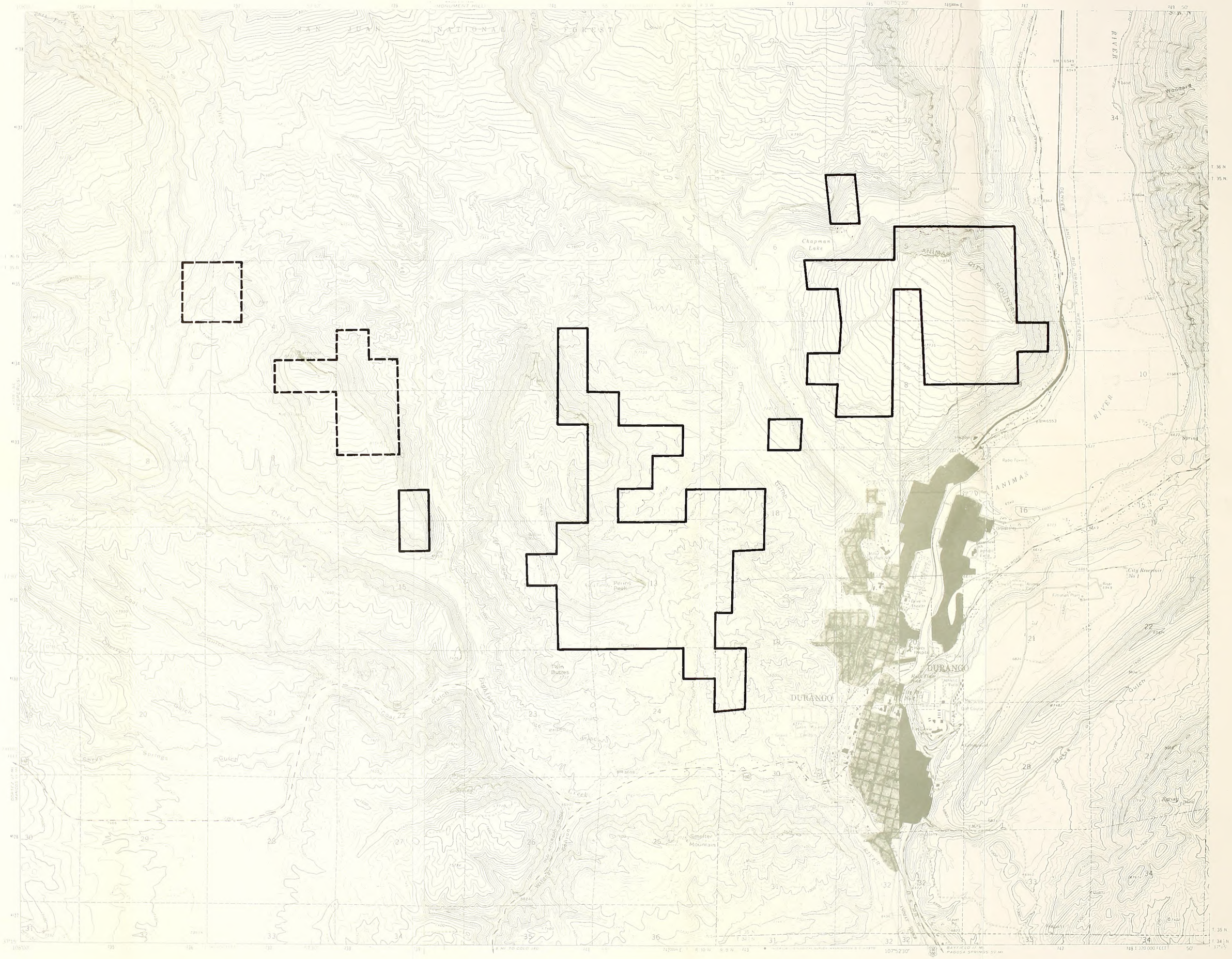
LAND OWNERSHIP

1

1 BLM
2 D.O.W.
3 USFS
4 Private

N

0 1/2 1 Mile
SCALE



GRAZING ALLOTMENT

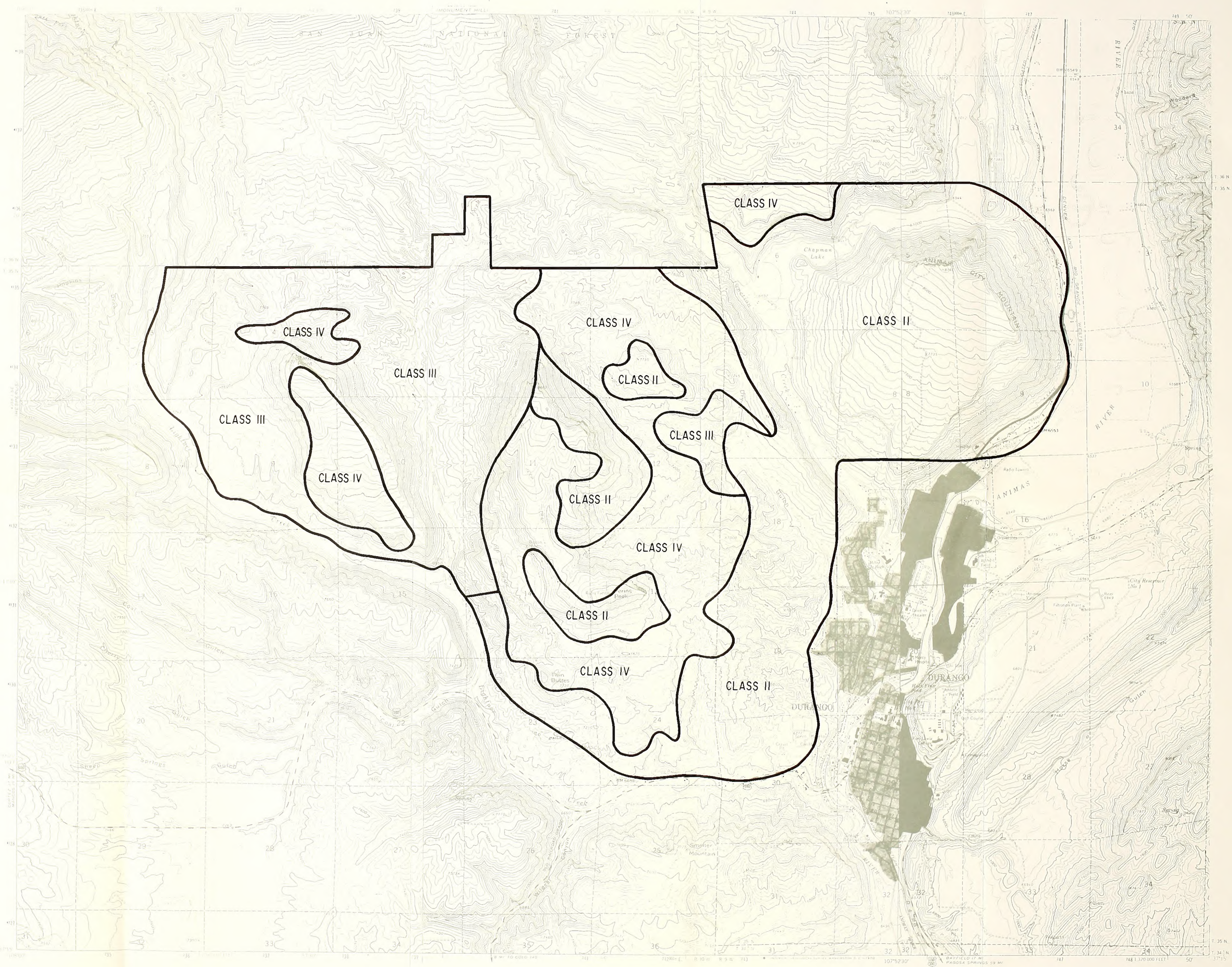
Grazing Privileges Retired

Grazing Privileges Licensed

N

0 1/2 1 Mile

SCALE



VISUAL RESOURCES

3

N

0 1/2 1 Mile

SCALE

SOIL MAPPING UNITS

RCL	Haploborolls - Rubble Land Complex	XMI-E	Valto Rock Outcrop Complex
XC5F	Carrocas-Sanchez Complex	XM6-D	Fortwingate - Rock Outcrop Complex
C5F	Carracos Loam	M6CD	Fortwingate Stoney Fine Sandy Loam
V5CD	Cloyburn Loam	E6-CE	Midway Clay and Clay Loam
V2CD	Hesperus Loam	A3-B	Jodero Loam
V9CD	Connerton Loam	Bd	Badlands
V4CD	Big Blue Clay Loam	RL	Rock Outcrop

N

0 1/2 1 Mile

SCALE

4

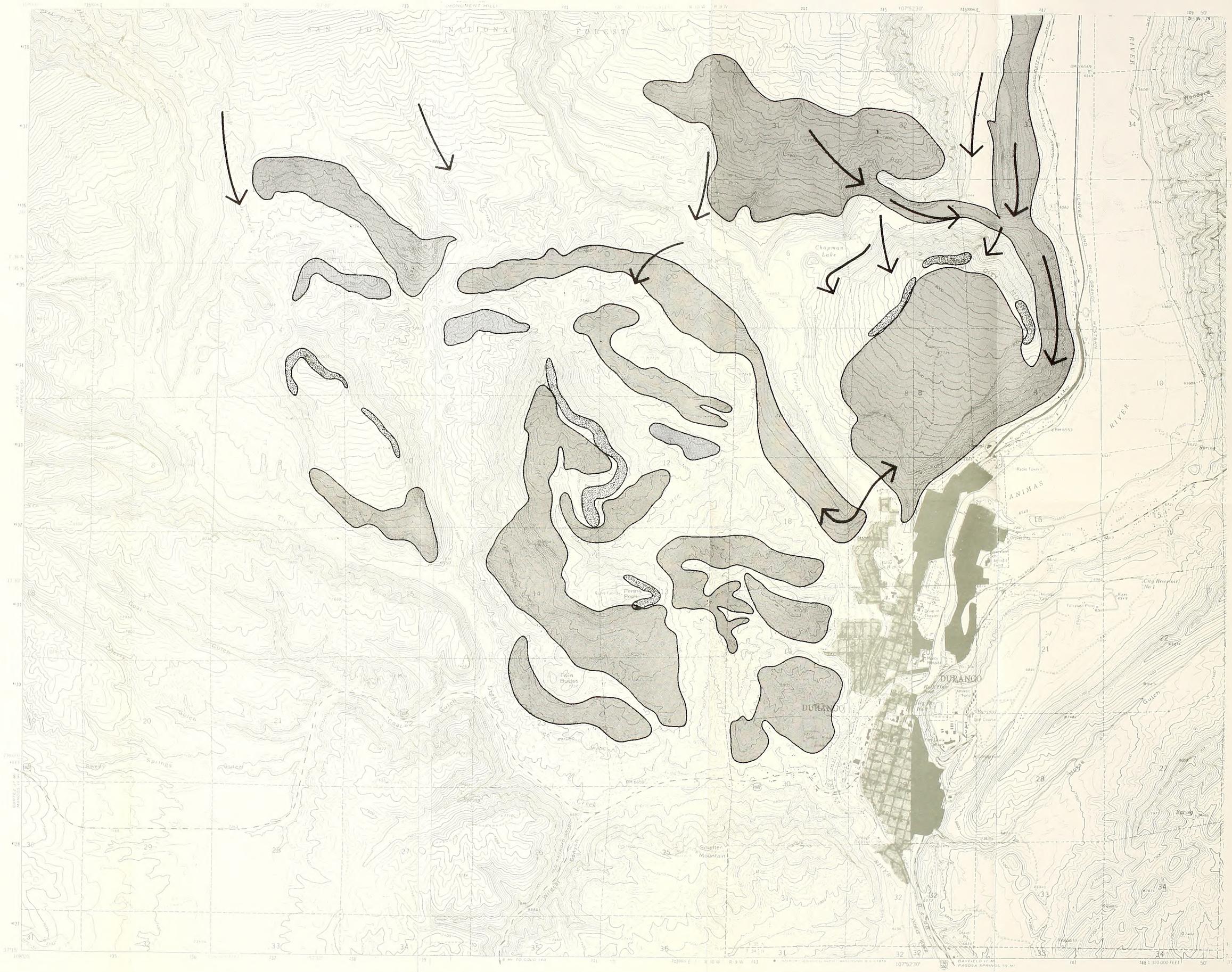
VEGETATION INVENTORY

N

0 1/2 1 Mile
SCALE

- Juniper-Piñon
- Douglas Fir
- Aspen
- Ponderosa Pine
- Mountain Shrub
- Meadow
- Riparian Cottonwood
- Riparian Shrub

5



WILDLIFE INVENTORY - CRITICAL USE AREAS

N

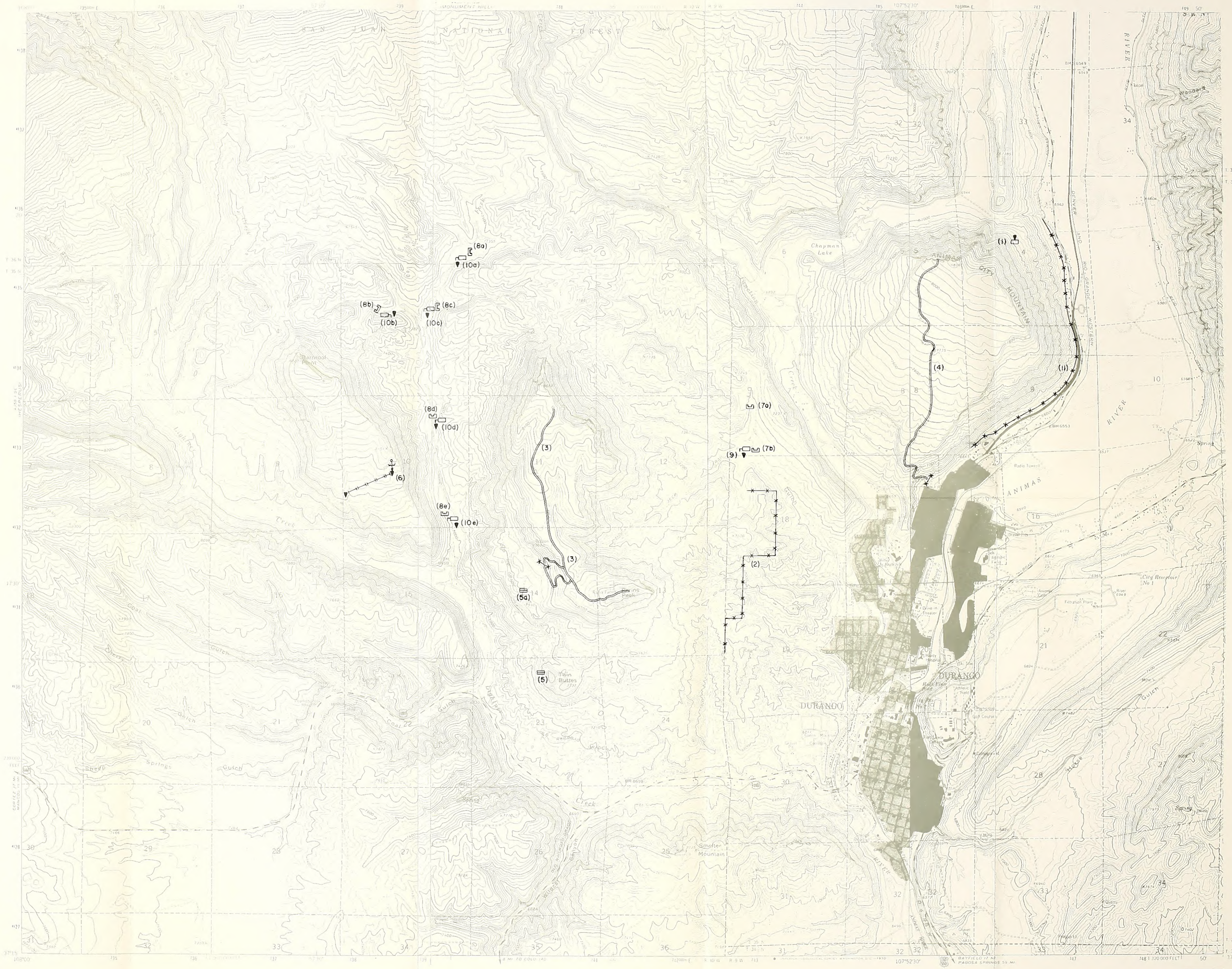
0 1/2 Mile
SCALE

Deer and Elk Winter Concentration Areas

Raptor Nesting Cliffs

Big Game Migration Routes

6



HABITAT IMPROVEMENT PROJECTS

7

- Traffic Gate
- Pipeline
- Rock Check Dam
- Storage Tank
- Fence
- Road
- Guzzler
- Catchment & Guzzler

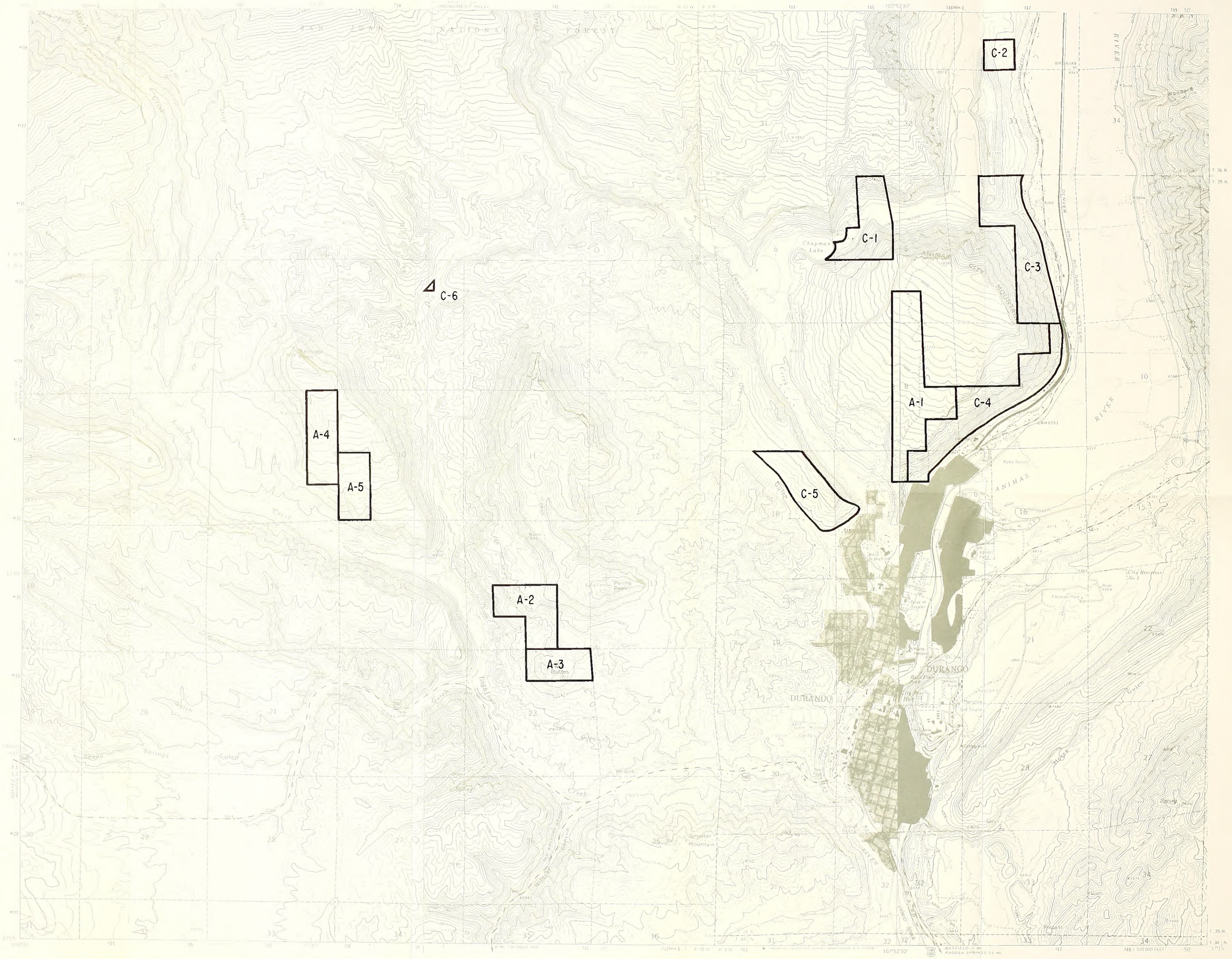
N

0 1/2 1 Mile
SCALE

HABITAT SITES and STUDY AREAS

ℒ	Study Areas
U	Utilization
T	Trend Condition
C	Vegetation Composition
F	Fecal Pellet Counts
M	Migration Route Track Count
P022	Habitat Sites

8



CONSERVATION EASEMENTS and LAND ACQUISITIONS